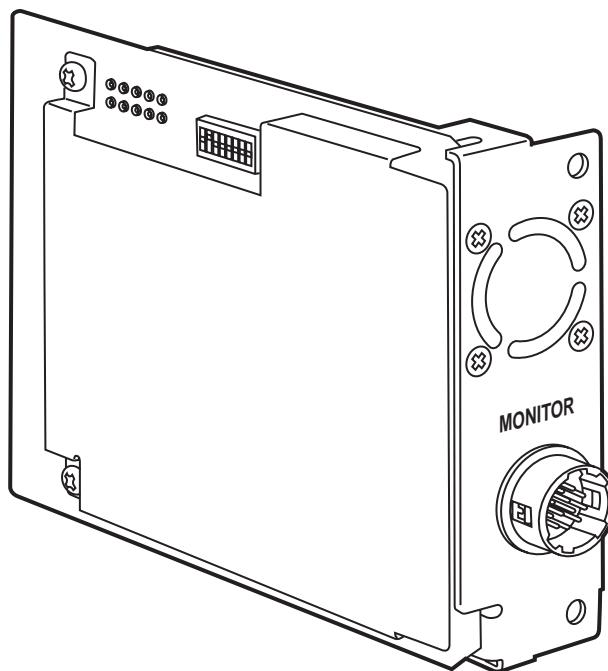


Service Manual

- Sec. 1** *Schematic Diagrams*
- Sec. 2** *Circuit Board Diagrams*
- Sec. 3** *Exploded Views & Replacement Parts Lists*

SVGA card
AW-PB307P/E



Panasonic

© 2002 Matsushita Electric Industrial Co., Ltd. All rights reserved.
Unauthorized copying and distribution is a violation of law.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products deal with in this service manual by anyone else could result in serious injury or death.

AW-PB307P

Specifications and accessories

Specifications

Power supply	: DC 12 V (supplied from camera unit)
Power consumption	: 3.7 W

 indicates safety information.

Dimensions (W × H × D)	: 3-5/8" × 2-3/4" × 7/8" (92 × 70 × 21.5 mm)
Weight	: 0.24 lbs (110 g)
Screen size	: XGA 1024 × 768 dots HSYNC; 48.8 kHz VSYNC; 60 Hz
	: SVGA 800 × 600 dots HSYNC; 37.9 kHz VSYNC; 60 Hz
	: VGA 640 × 480 dots HSYNC; 31.5 kHz VSYNC; 60 Hz
Output connector	: MONITOR, round 12-pin connector (converted to D-sub 15-pin connector using the accessory conversion cable)
Usable temperature range	: 14 F to 113 F (-10°C to 45°C)
Humidity	: 30% to 90%

Accessories

Operating Instructions	: x 1
12-pin/15-pin conversion cable	: x 1
Screws (6 mm long) (8 mm long)	: x 2 : x 4

Specifications and accessories

Specifications

Power supply	: DC 12 V (supplied from camera unit)
Power consumption	: 3,7 W

 indicates safety information.

Dimensions (W × H × D)	: 92 × 70 × 21,5 mm
Weight	: 110 g
Screen size	: XGA 1024 × 768 dots HSYNC; 48,8 kHz VSYNC; 60 Hz
	: SVGA 800 × 600 dots HSYNC; 37,9 kHz VSYNC; 60 Hz
	: VGA 640 × 480 dots HSYNC; 31,5 kHz VSYNC; 60 Hz
Output connector	: MONITOR, round 12-pin connector (converted to D-sub 15-pin connector using the accessory conversion cable)
Usable temperature range	: -10°C to 45°C
Humidity	: 30% to 90%

Accessories

Operating Instructions	: × 1
12-pin/15-pin conversion cable	: × 1
Screws (6 mm long)	: × 2
(8 mm long)	: × 4

SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohm meter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. The resistance value must be more than 5Ω .

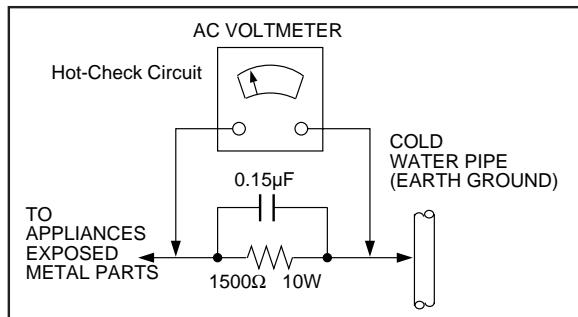


Figure1

LEAKAGE CURRENT HOT CHECK (See Figure 1)

1. Plug the AC cord directly into the AC outlet.
Do not use an isolation transformer for this check.
2. Connect a $1.5k\Omega$, $10W$ resistor, in parallel with a $0.15\mu F$ capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet repeat each of the above measurements.
6. The potential at any point should not exceed 0.15 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 0.1 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically sensitive (ED) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground.
Alternatively, obtain and wear a commercially available discharging wrist trap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it.
(most replacement ES devices are package with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
CAUTION : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpacked replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

X-RADIATION

WARNING

1. The potential source of X-radiation in EVF sets is the High Voltage section and the picture tube.
2. When using a picture tube test jig for service, ensure that jig is capable of handling 10kV without causing x-radiation.

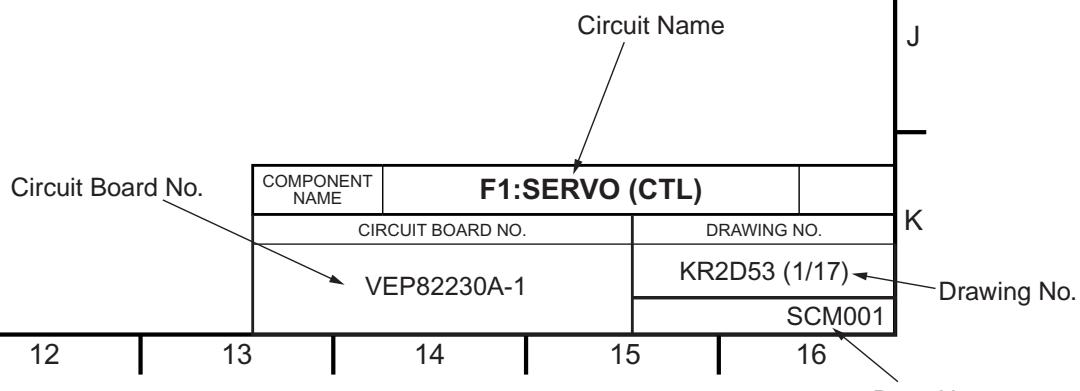
Note : It is important to use an accurate periodically calibrated high voltage meter.

3. Measure the High Voltage. The meter (electric type) reading should indicate $2.5kV$, $\pm 0.15kV$. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure. To prevent an x-radiation possibility, it is essential to use the specified picture tube.

SECTION 1

SCHEMATIC DIAGRAMS

About indication of a circuit name



NOTE:

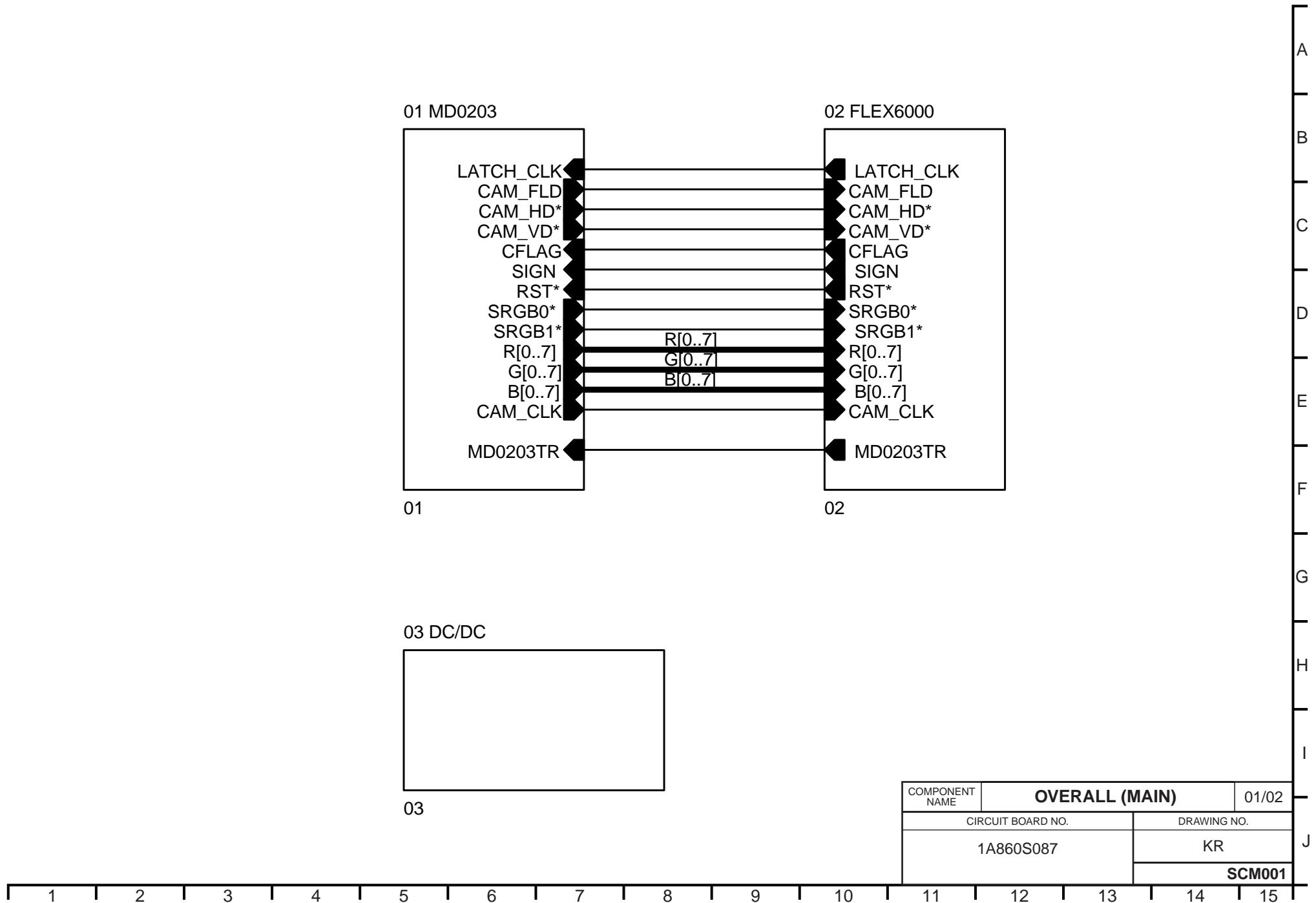
BE SURE TO MAKE YOUR ORDERS OF REPLACEMENT PARTS ACCORDING TO PARTS LIST

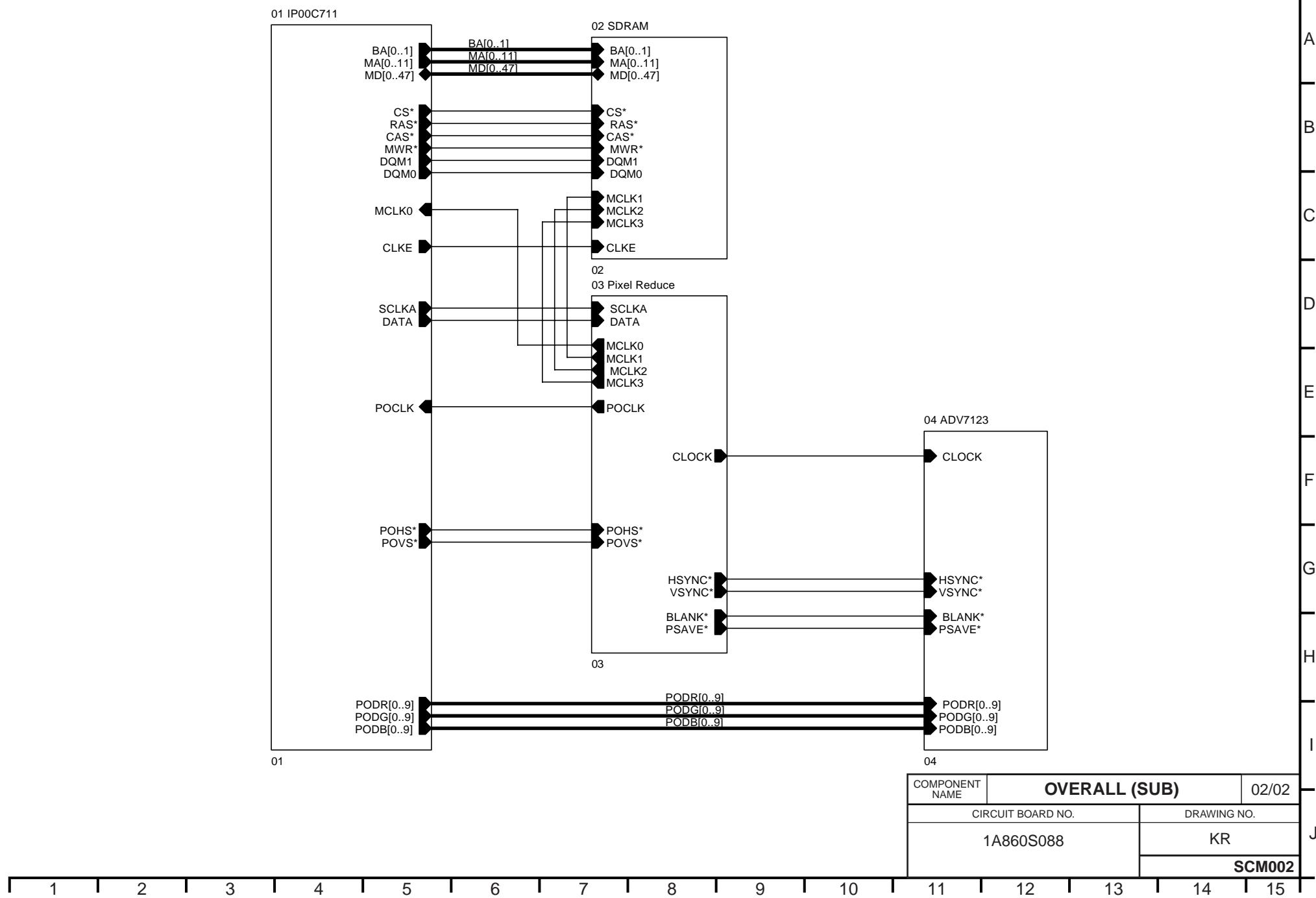
IMPORTANT SAFETY NOTICE:

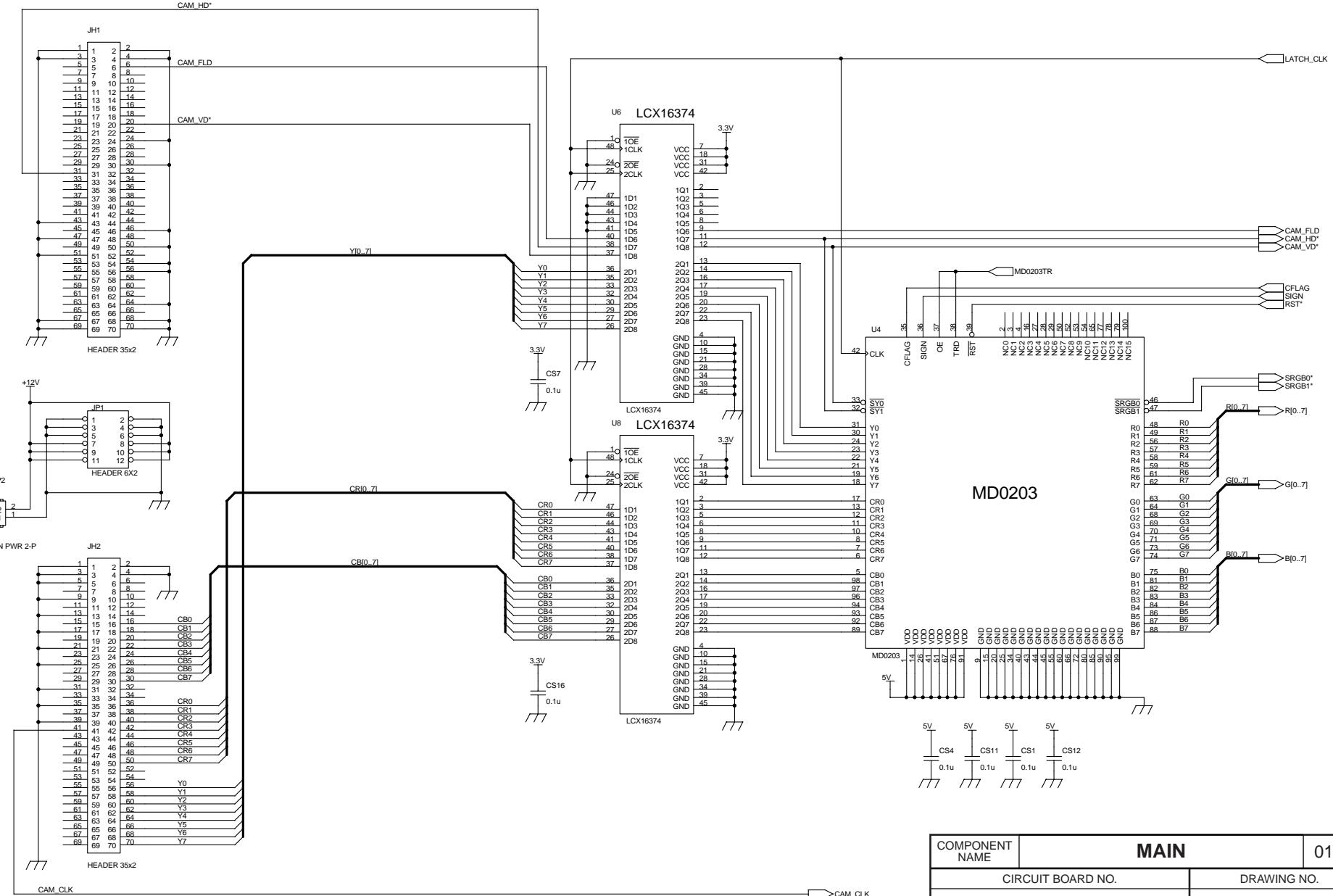
COMPONENTS IDENTIFIED WITH THE MARK HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

CONTENTS

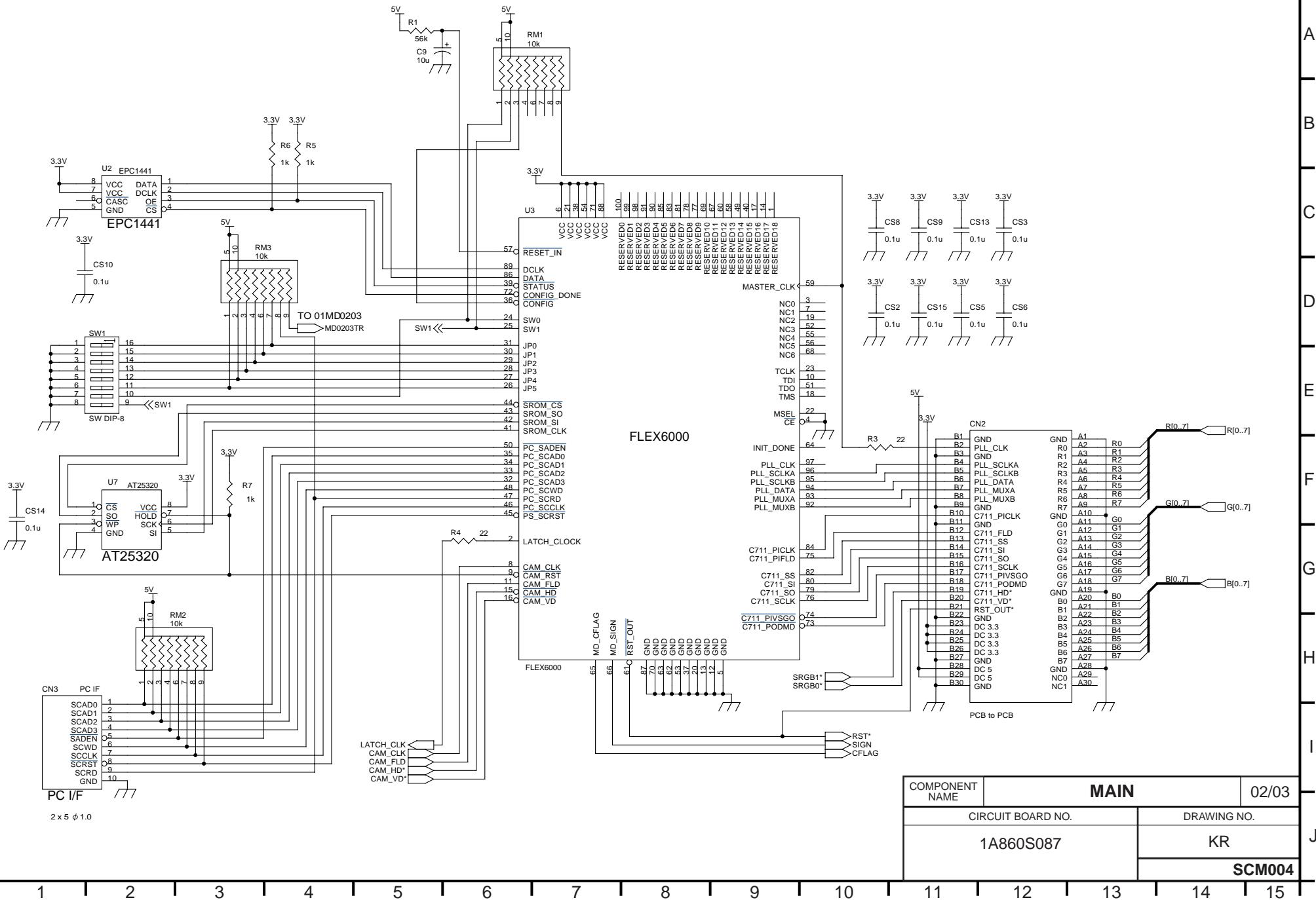
OVERALL (MAIN) (1/2).....	SCM001
OVERALL (SUB) (2/2)	SCM002
MAIN (1/3).....	SCM003
MAIN (2/3).....	SCM004
MAIN (3/3).....	SCM005
SUB (1/4).....	SCM006
SUB (2/4).....	SCM007
SUB (3/4).....	SCM008
SUB (4/4).....	SCM009

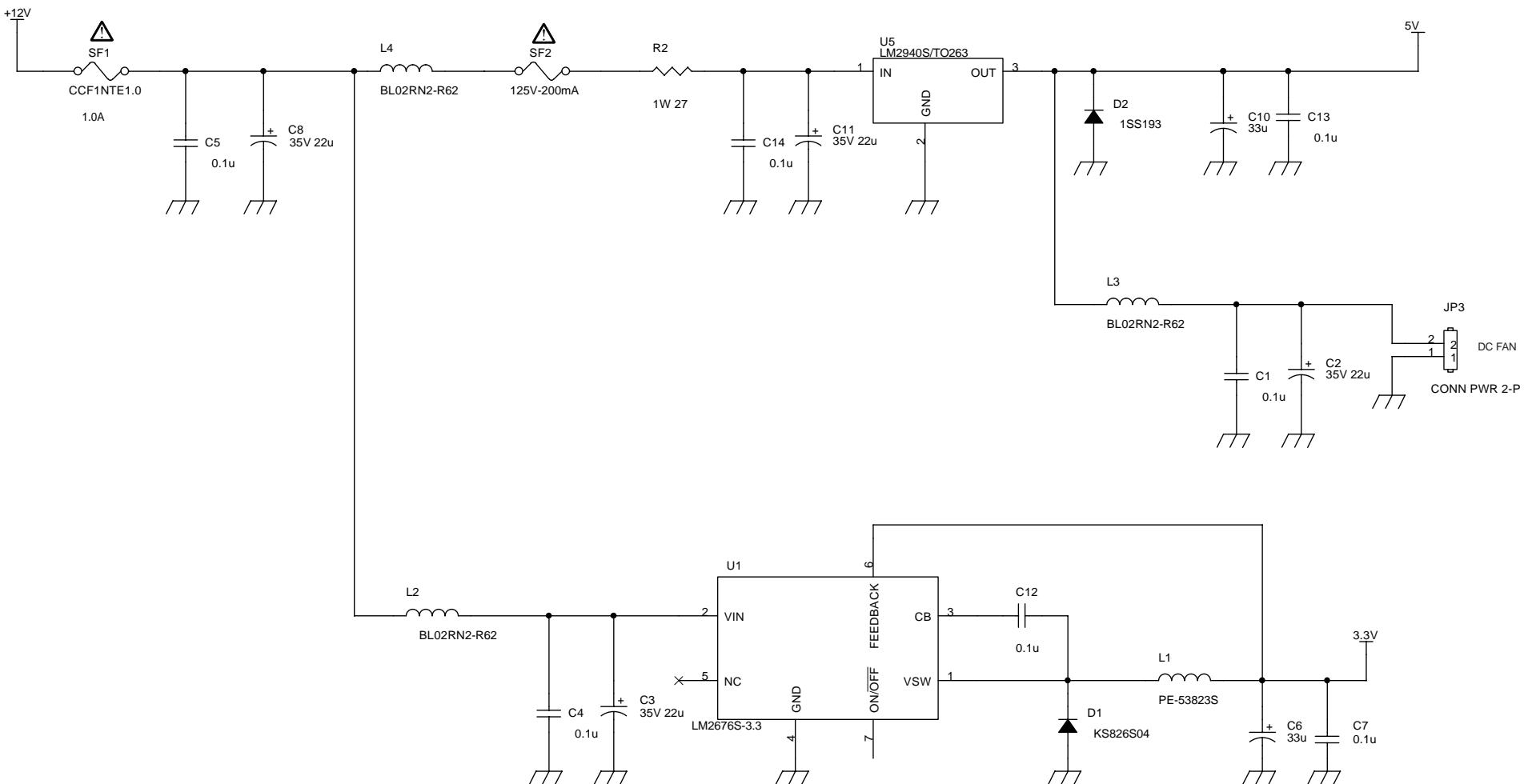






1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

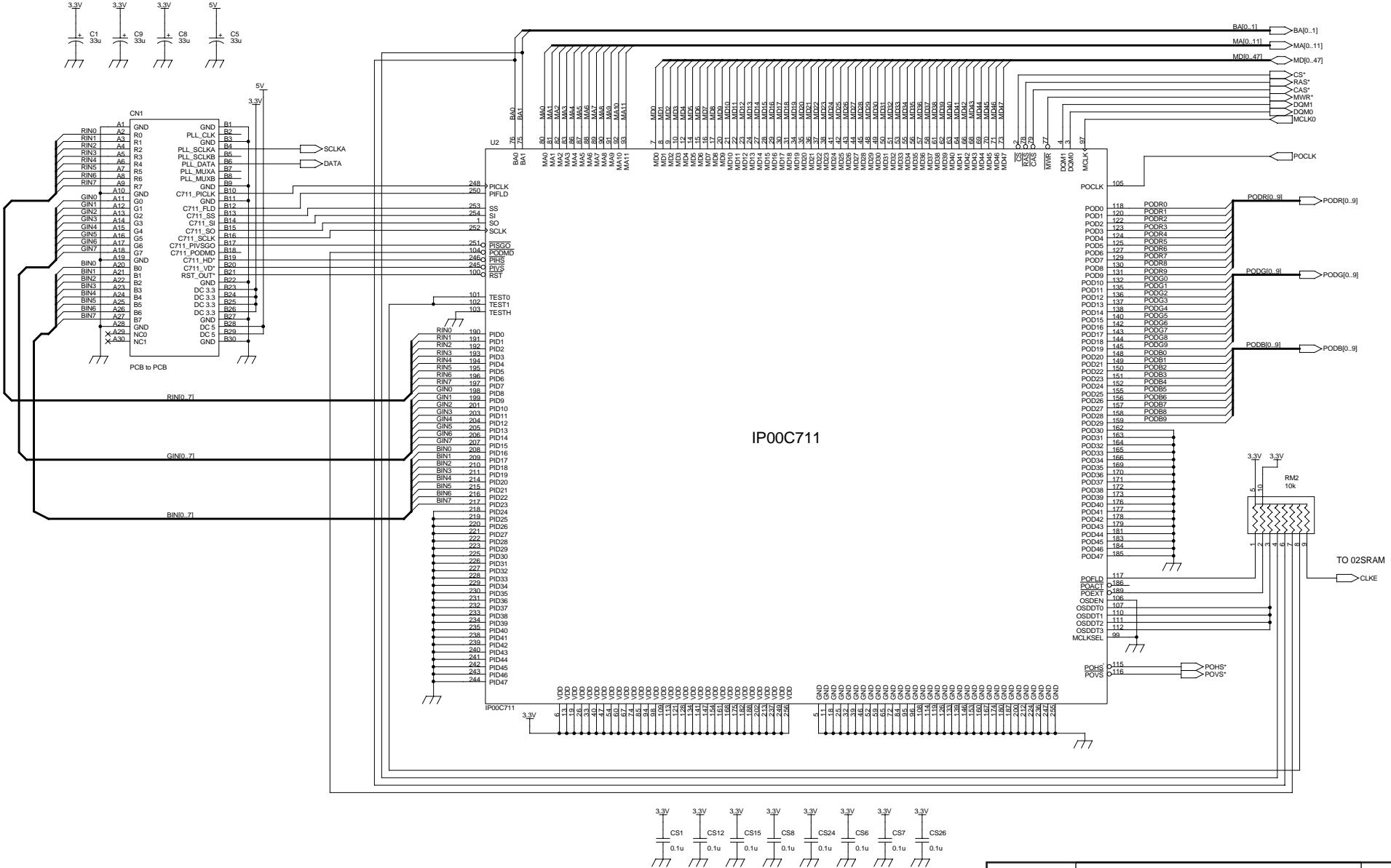




IMPORTANT SAFETY NOTICE:

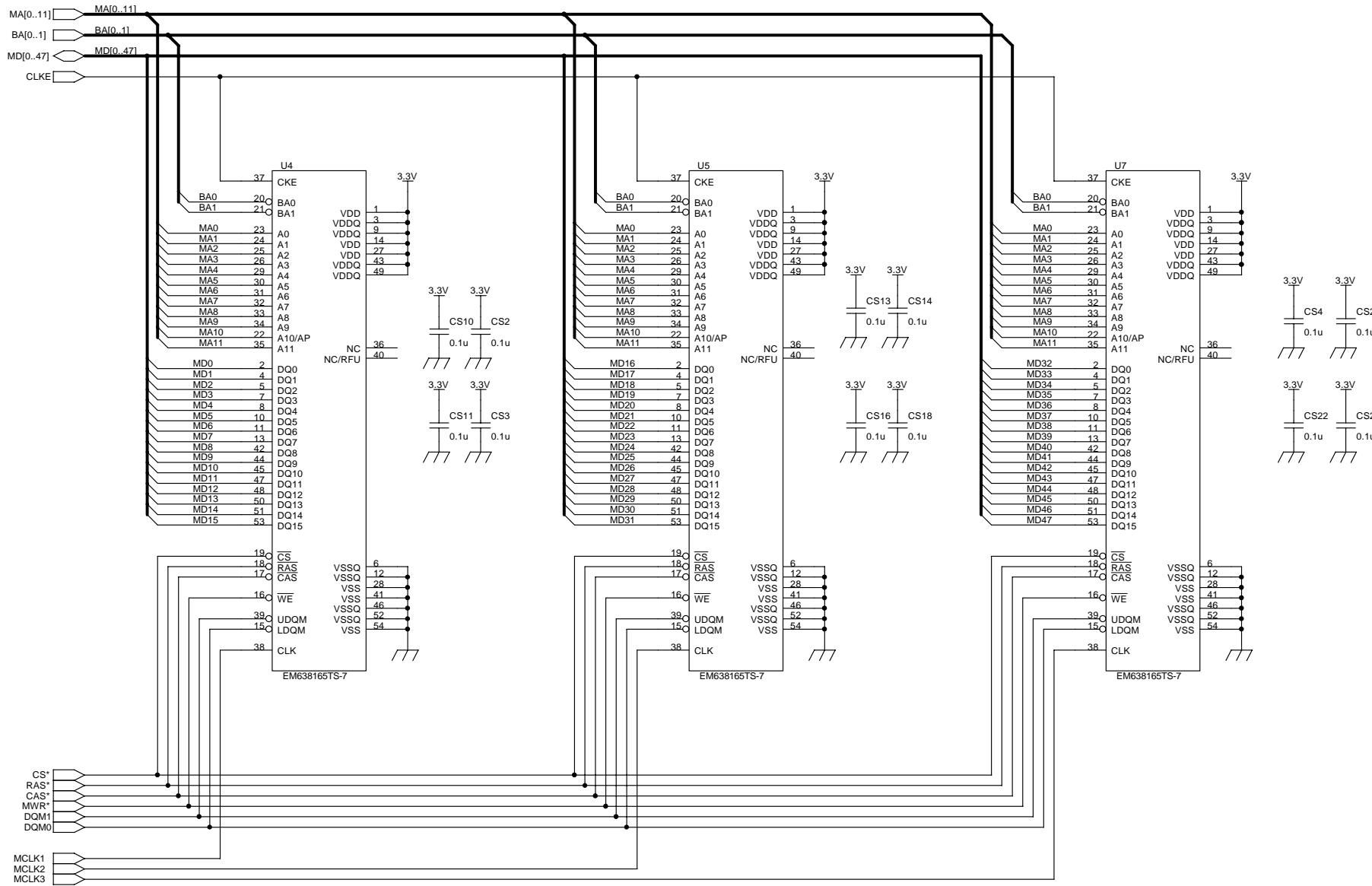
COMPONENTS IDENTIFIED WITH THE MARK Δ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

COMPONENT NAME	MAIN	03/03
CIRCUIT BOARD NO.	DRAWING NO.	
1A860S087	KR	
SCM005		



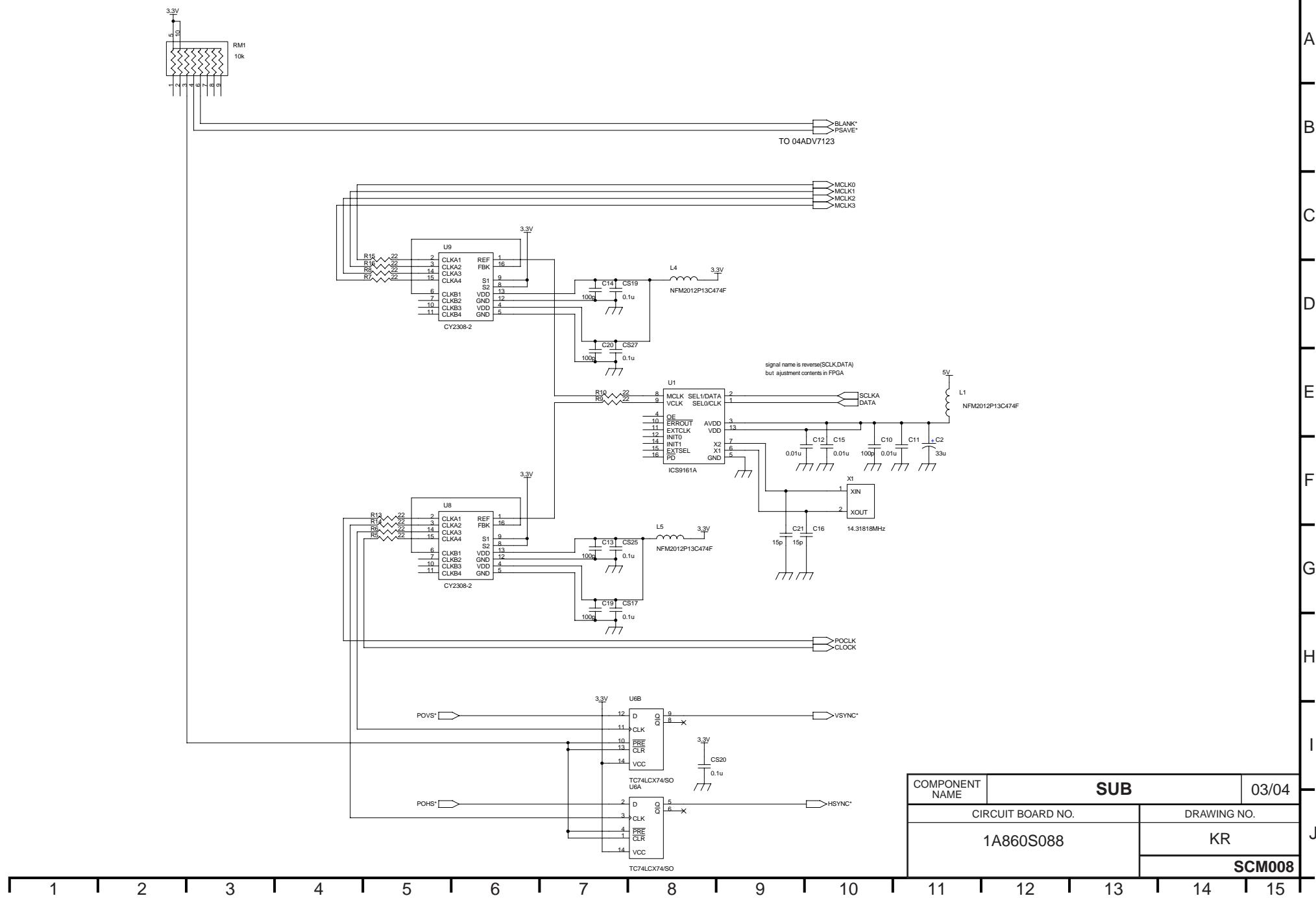
COMPONENT NAME	SUB	01/04
CIRCUIT BOARD NO.	DRAWING NO.	
1A860S088	KR	
SCM006		

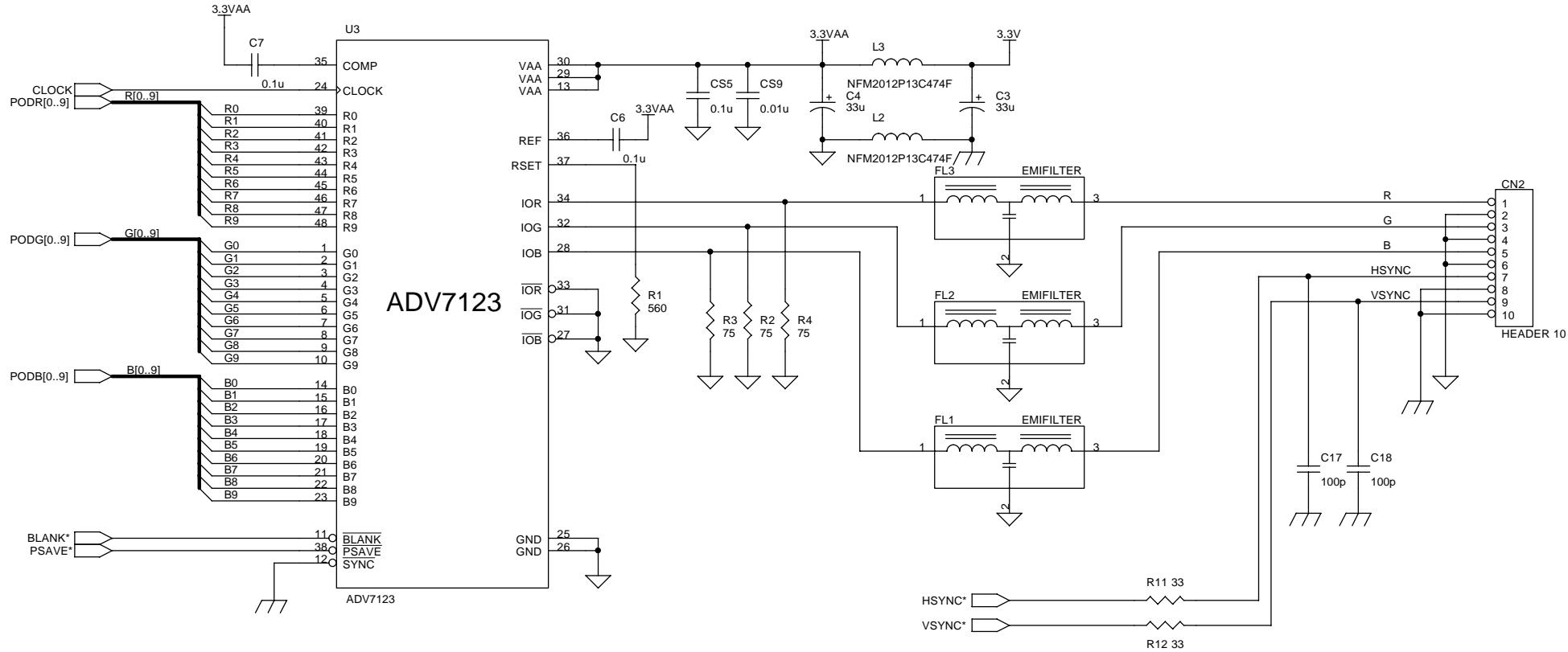
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



COMPONENT NAME	SUB	02/04
CIRCUIT BOARD NO.	DRAWING NO.	
1A860S088	KR	
SCM007		

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15





COMPONENT NAME	SUB	04/04
CIRCUIT BOARD NO.		DRAWING NO.
1A860S088	KR	
SCM009		

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

A
B
C
D
E
F
G
H
I
J

SECTION 2

CIRCUIT BOARD DIAGRAMS

NOTE:

BE SURE TO MAKE YOUR ORDERS OF REPLACEMENT PARTS ACCORDING TO PARTS LIST

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

CONTENTS

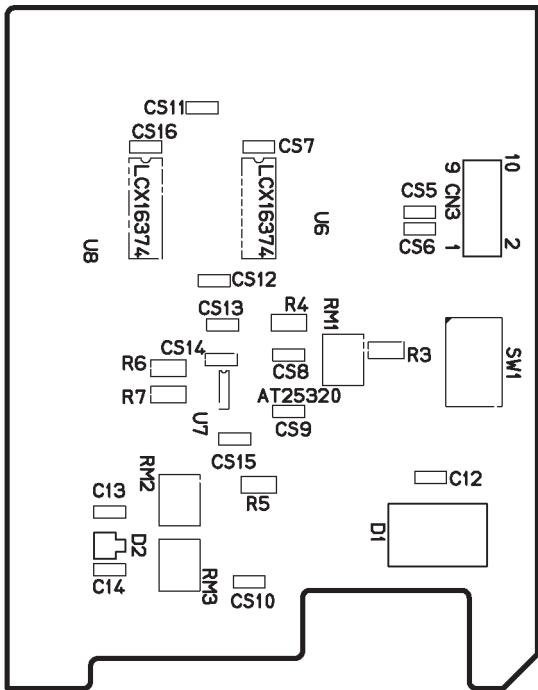
MAIN P.C.BOARD (1A860S087).....	CBA-1
SUB P.C.BOARD (1A860S088)	CBA-1

MAIN P.C.BOARD (1A860S087)

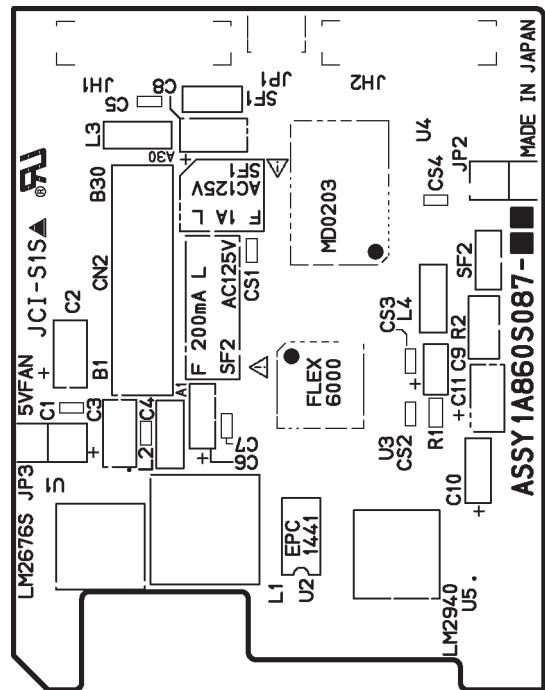
IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED WITH CHARACTERISTICS OF A CANNIBAL

CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS. USE ONLY THE
SAME TYPE.

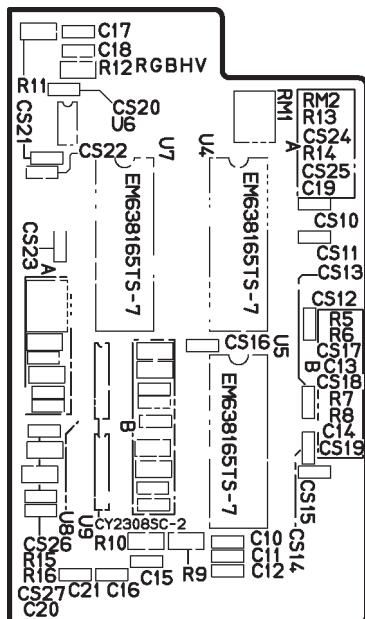


(FOIL SIDE)

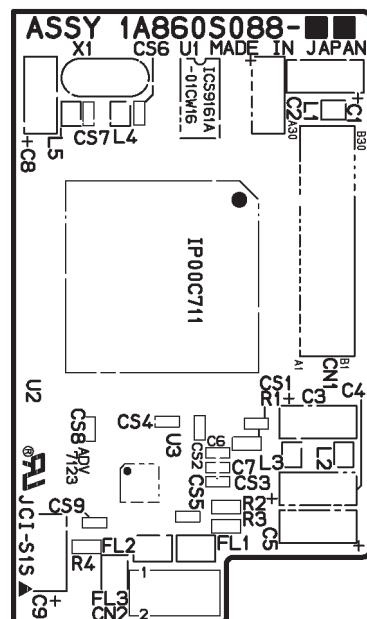


(COMPONENTSIDE)

SUB P.C.BOARD (1A860S088)



(FOIL SIDE)



(COMPONENTSIDE)

SECTION 3

EXPLODED VIEWS & REPLACEMENT PARTS LISTS

Note:

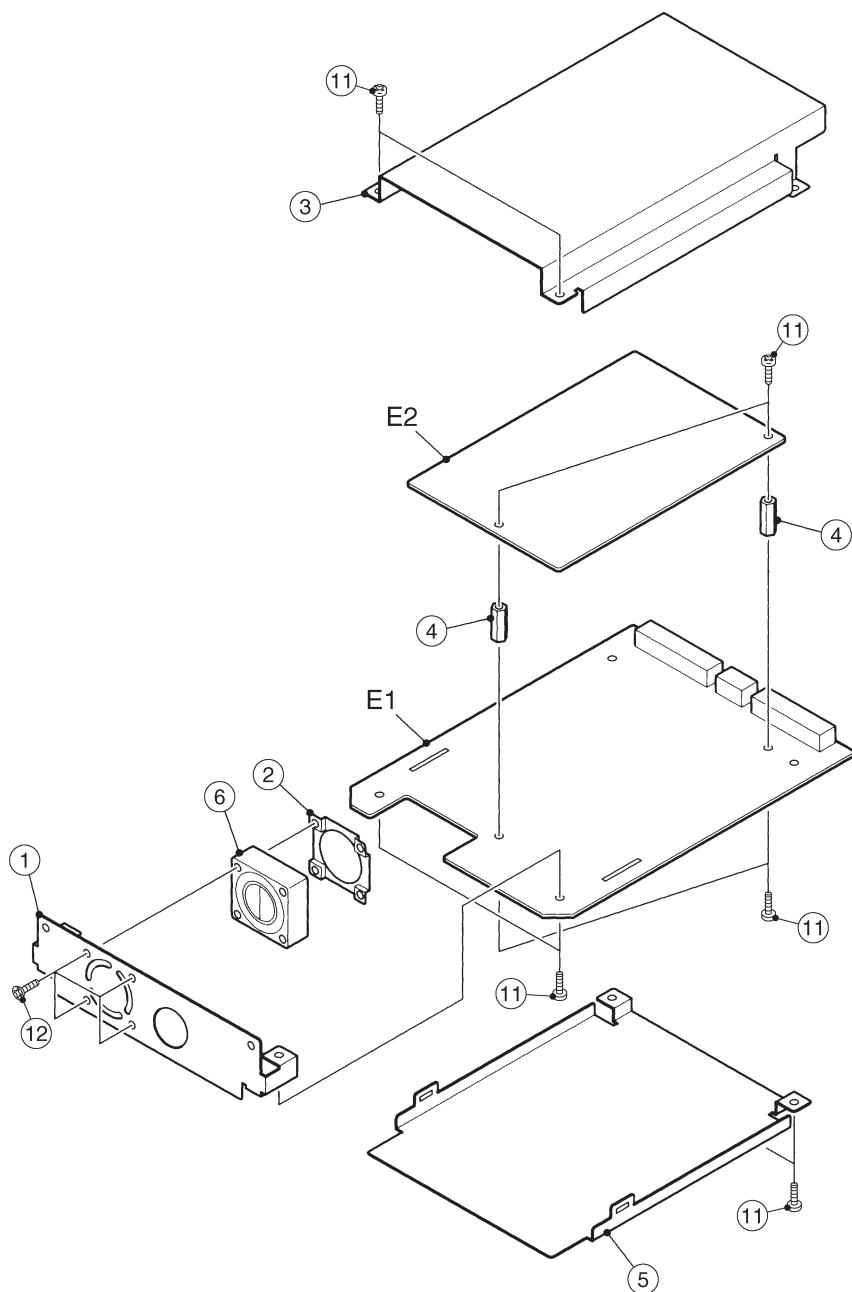
1. *Be sure to make your orders of replacement parts according to this list.
2. Unless otherwise specified, all resistors are in OHMS, K=1,000 OHMS,
all capacitors are in MICROFARADS (μ F), P= $\mu\mu$ F.
3. The P.C. Board units marked with "■" shown below the main assembled parts.
4. The parts marked with \ominus on the exploded view show the electric parts.
5. **IMPORTANT SAFETY NOTICE**
Components identified with the mark \triangle have the special characteristics for safety. When replacing any
of these components, use only the same type.
6. The marking (RTL) indicates the retention time is limited for this item.
After the discontinuation of this assembly in production, it will no longer be available.

CONTENTS

Casing Parts Assembly	PRT-1
Packing Parts Assembly.....	PRT-3
Electrical Replacement Parts List.....	PRT-5

CASING PARTS ASSEMBLY

CASING PARTS ASSEMBLY

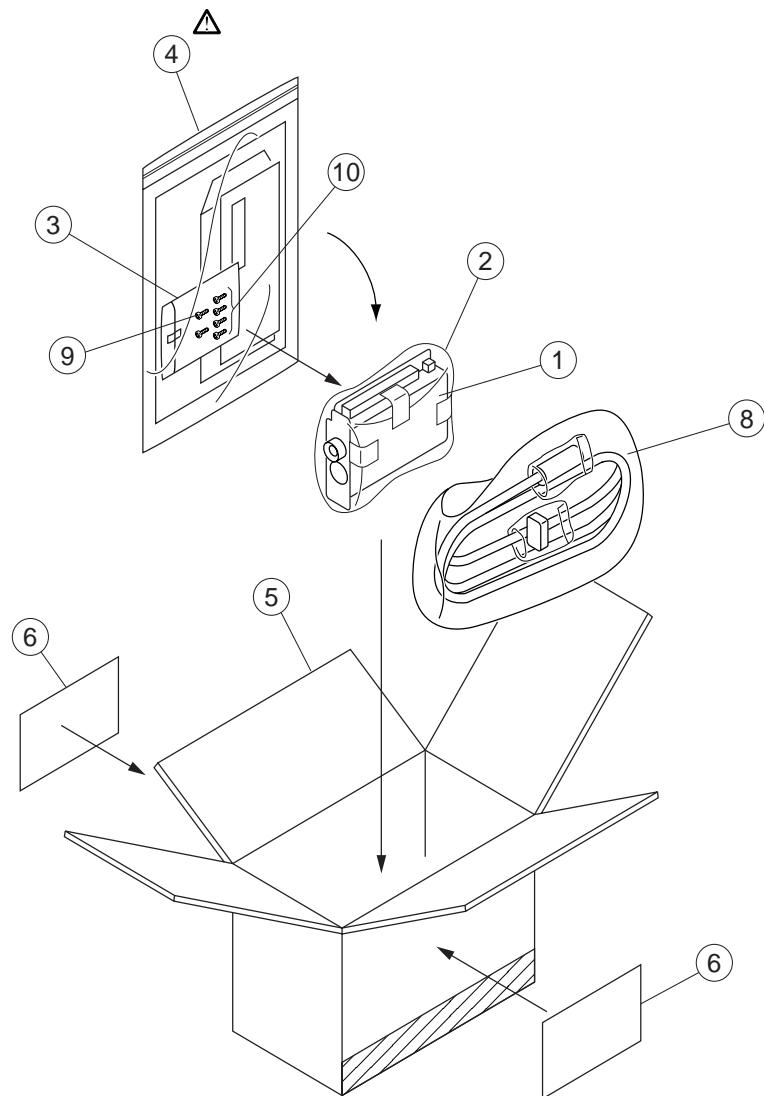


PACKING PARTS ASSEMBLY

Components identified with the mark  have the special characteristic for safety.
When replacing any of these components, use only the same type.

PACKING PARTS ASSEMBLY

Components identified with the mark Δ have the special characteristic for safety.
When replacing any of these components, use only the same type.



Components identified with the mark **▲** have the special characteristic for safety.
When replacing any of these components, use only the same type.

ELECTRICAL REPLACEMENT PARTS LIST

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E1	1A860S087	SVGA P.C.BORAD	1	(RTL)
■ E2	1A860S088	SVGA SUB P.C.BORAD	1	(RTL)
■ E1	1A860S087	SVGA P.C.BORAD	1	(RTL)
C1	F1H1E1040001	C.CAPACITOR CH 25V 0.1U	1	
C2,C3	TMCME1V226	CAPACITOR	2	
C4,C5	F1H1E1040001	C.CAPACITOR CH 25V 0.1U	2	
C6	TMCMC1C336	CAPACITOR	1	
C7	F1H1E1040001	C.CAPACITOR CH 25V 0.1U	1	
C8	TMCME1V226	CAPACITOR	1	
C9	F3G1C1060005	T.CAPACITOR CH 16V 10U	1	
C10	TMCMC1C336	CAPACITOR	1	
C11	TMCME1V226	CAPACITOR	1	
C12-14	F1H1E1040001	C.CAPACITOR CH 25V 0.1U	3	
CN2	5-179010-2	CAPACITOR	1	
CS1-16	F1H1E1040001	C.CAPACITOR CH 25V 0.1U	16	
D1	KS826S04	DIODE	1	
D2	ISS193	DIODE	1	
FA1	F2008BB-5XCV	DC FAN	1	
JH1,H2	K1MR70B00001	CONNECTOR	2	
JP1	K1KA12B00002	CONNECTOR (MALE)	1	
JP2,P3	5046-02A	CONNECTOR	2	
L1	PE-53823S	COIL	1	
L2-L4	VLP0056	COIL	3	
R1	RK73K2ATD56K	M.RESISTOR	56K	1
R2	RK73H3ATD27	M.RESISTOR	27	1
R3,R4	RK73K2ATD22	M.RESISTOR	27	2
R5-R7	RK73K2ATD1K	M.RESISTOR	1K	3
RM1-M3	D1HA10380003	COMBI.R-R	10K	3
▲ SF1	SSFC1A	FUSE	1	K5G102B00004
▲ SF2	SSFC200MA	FUSE	1	
SW1	CHS-08A	SWITCH	1	
U1	LM2676S-3.3	IC	1	
U2	EPC1441PC8	IC	1	C3DAKA000013
U3	C1ZBZ0001760	IC	1	
U4	MD0203	IC	1	
U5	C0CBADG00007	IC	1	
U6	C0JBAF000211	IC	1	
U7	C3EACC000024	IC	1	
U8	C0JBAF000211	IC	1	
		MISCELLANEOUS		
XNG2E	NUT		1	
XWG2	WASHER		1	
XWA2B	WASHER		1	

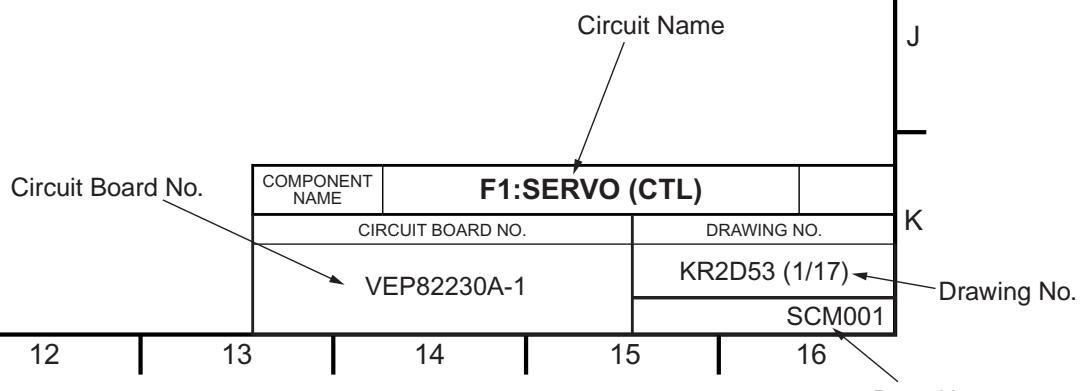
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E2	1A860S088	SVGA SUB P.C.BORAD	1	(RTL)
C6,C7	F1H1E1040001	C.CAPACITOR CH 25V 0.1U	2	
C10	F1H1H101A802	C.CAPACITOR CH 50V 100P	1	
C11,12	F1H1E1030011	C.CAPACITOR CH 25V 0.01U	2	
C13,14	F1H1H101A802	C.CAPACITOR CH 50V 100P	2	
C15	F1H1E1030011	C.CAPACITOR CH 25V 0.01U	1	
C17-20	F1H1H101A802	C.CAPACITOR CH 50V 100P	4	
CN1	177984-2	CONNECTOR	1	
CN3	HR10A10R12P	CONNECTOR (MALE)	1	K1AA112J0004
CS1-S8	F1H1E1040001	C.CAPACITOR CH 25V 0.1U	8	
CS9	F1H1E1030011	C.CAPACITOR CH 25V 0.01U	1	
CS10-27	F1H1E1040001	C.CAPACITOR CH 25V 0.1U	18	
FL1-L3	NPM51R10P107	FILTER	3	
L1-L5	F1M1C4740001	COIL	5	
R1	RK73K2ATD560	M.RESISTOR	560	1
R2-R4	RK73K2ATD75	M.RESISTOR	75	3
R5-10	RK73K2ATD22	M.RESISTOR	22	6
R11,12	RK73K2ATD33	M.RESISTOR	33	2
R13-16	RK73K2ATD22	M.RESISTOR	22	4
RM1,M2	D1HA10380003	COMBI.R-R	10K	2
U1	C02BZ0000385	IC	1	
U1	IP00C711	IC	1	
U3	C0FBBF000029	IC	1	
U4,U5	EM638165FS-7	IC	2	
U6	TC74LCX74FT	IC	1	
U7	EM638165FS-7	IC	1	
U8,U9	CY2308SC-2	IC	2	
X1	AT-49	CRYSTAL OSCILLATOR	1	

Panasonic

SECTION 1

SCHEMATIC DIAGRAMS

About indication of a circuit name



NOTE:

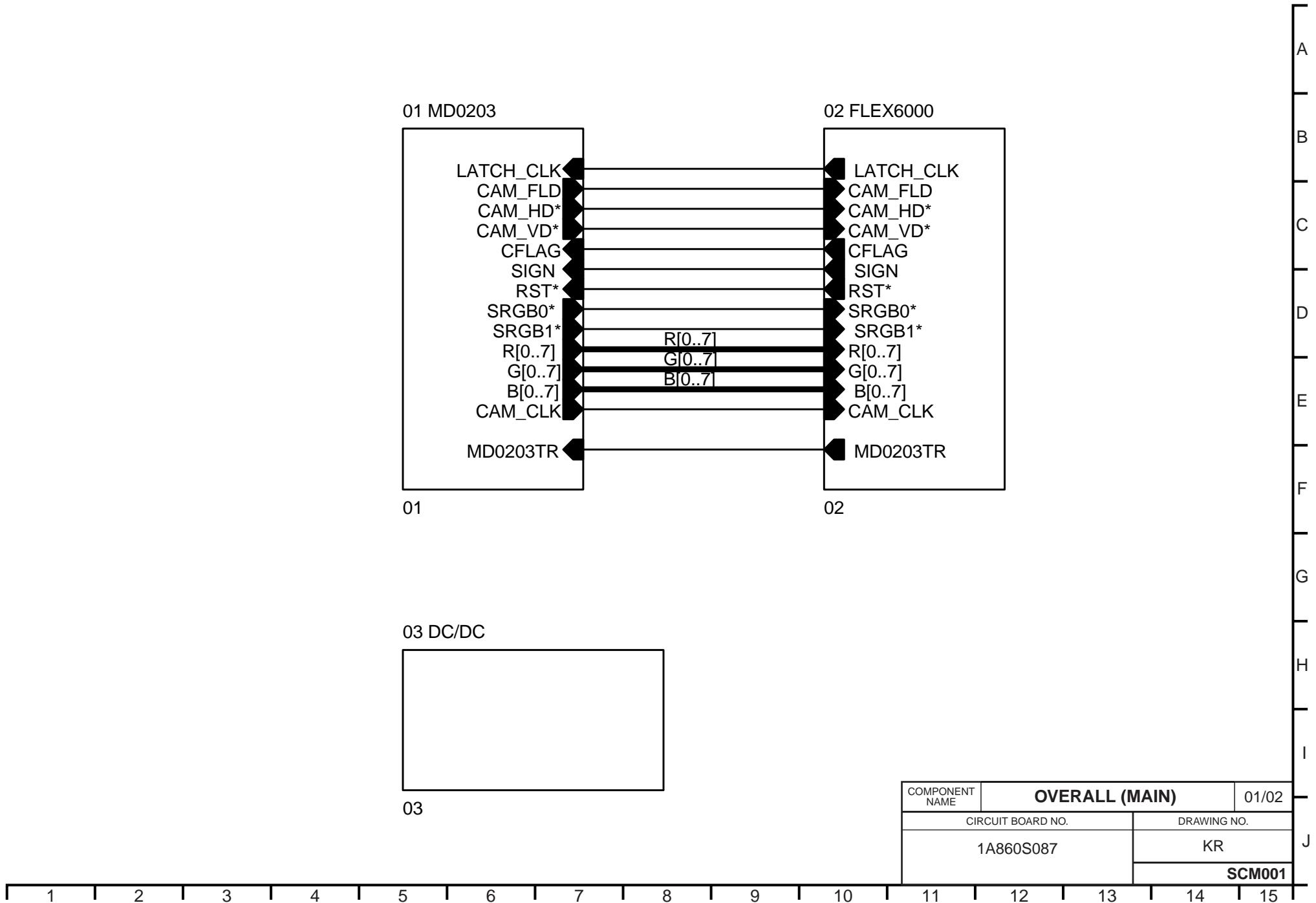
BE SURE TO MAKE YOUR ORDERS OF REPLACEMENT PARTS ACCORDING TO PARTS LIST

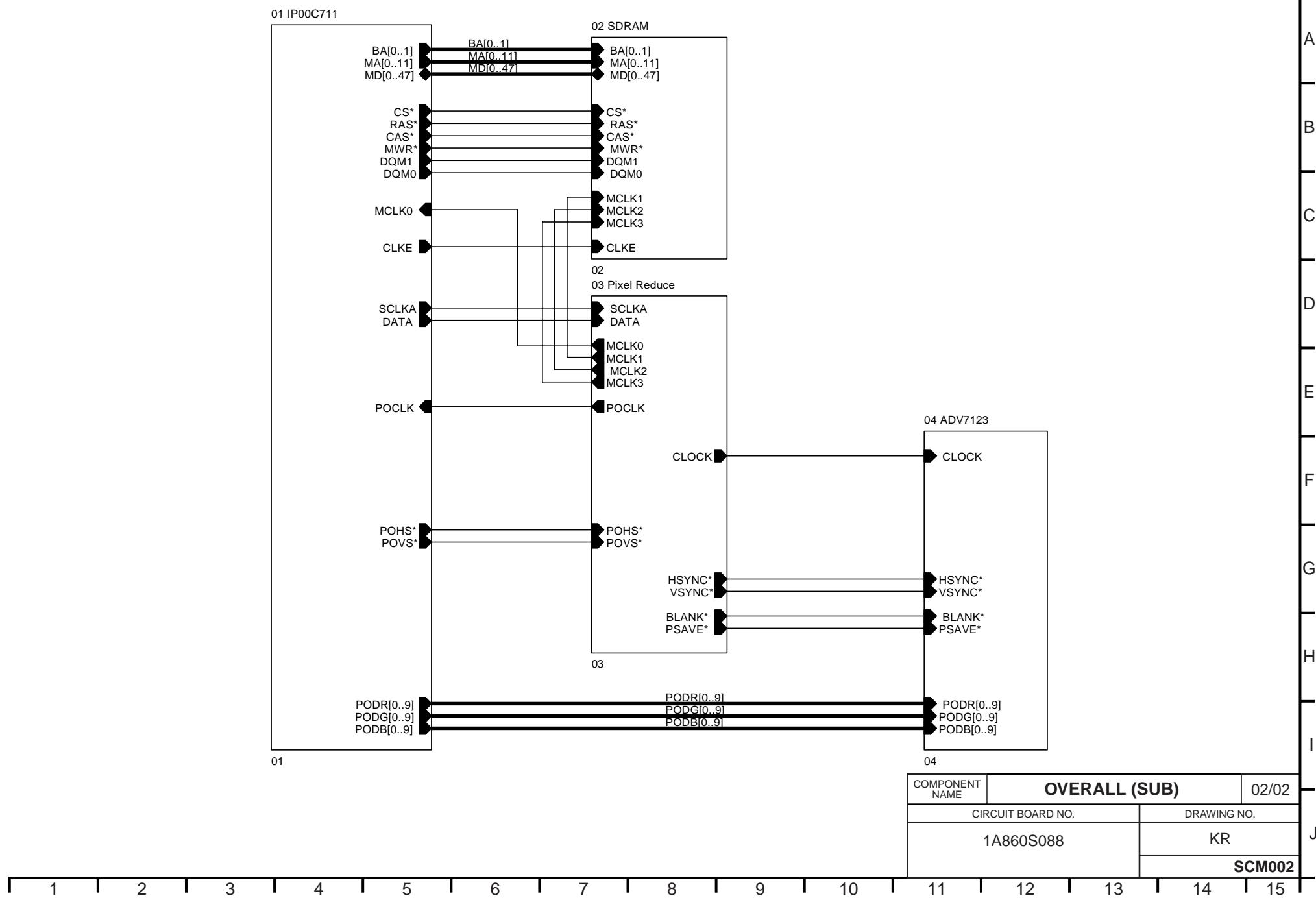
IMPORTANT SAFETY NOTICE:

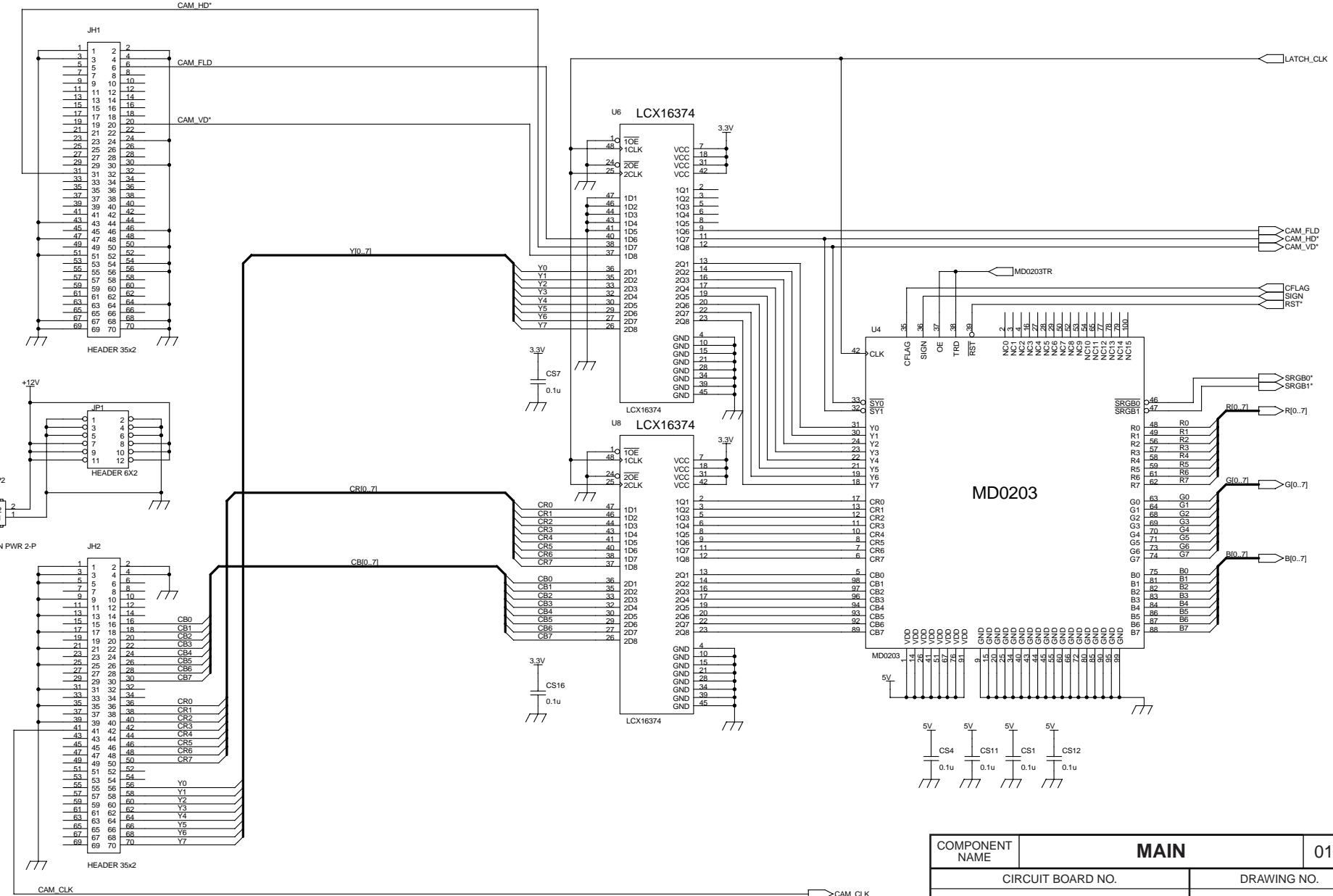
COMPONENTS IDENTIFIED WITH THE MARK HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

CONTENTS

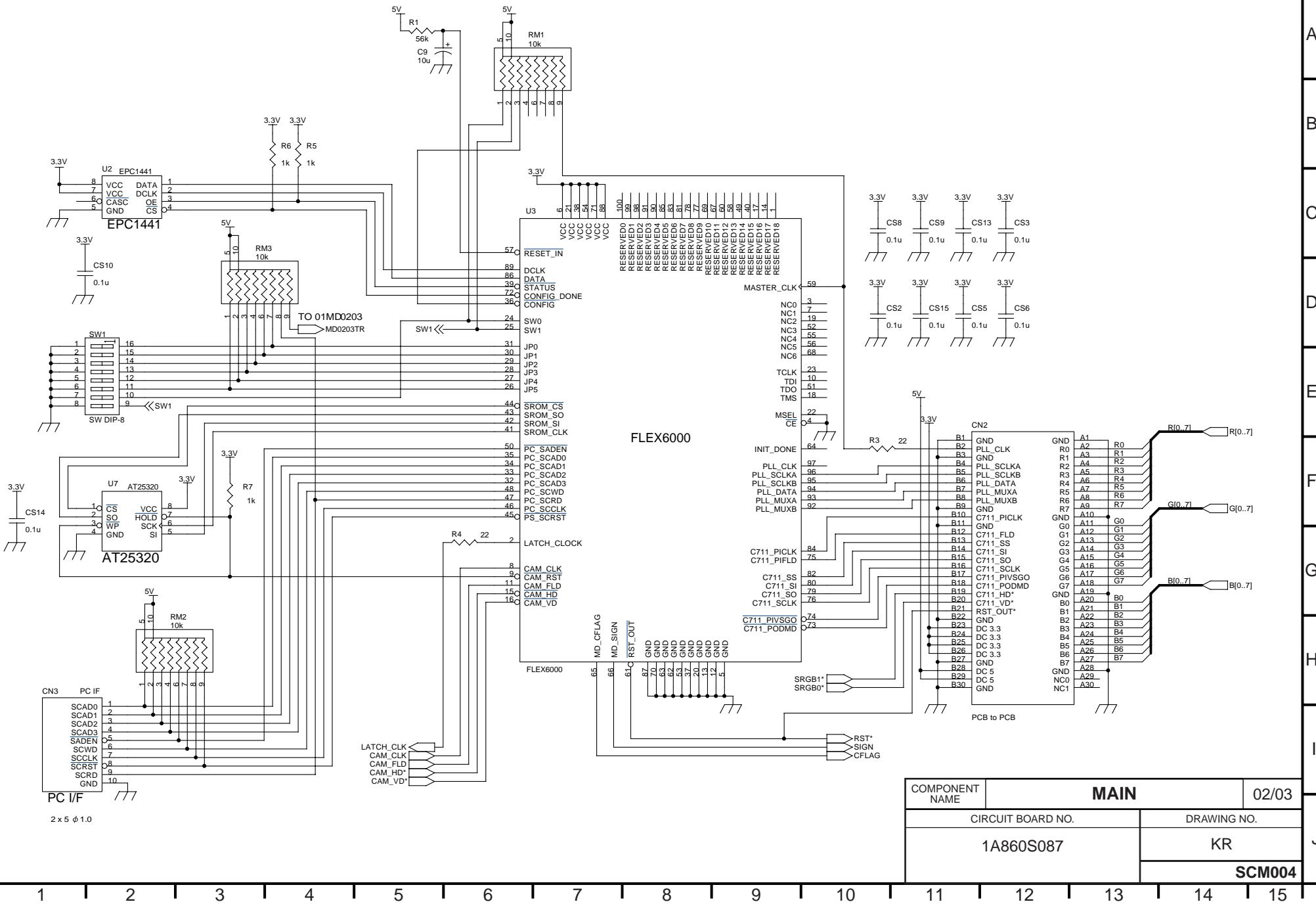
OVERALL (MAIN) (1/2).....	SCM001
OVERALL (SUB) (2/2)	SCM002
MAIN (1/3).....	SCM003
MAIN (2/3).....	SCM004
MAIN (3/3).....	SCM005
SUB (1/4).....	SCM006
SUB (2/4).....	SCM007
SUB (3/4).....	SCM008
SUB (4/4).....	SCM009

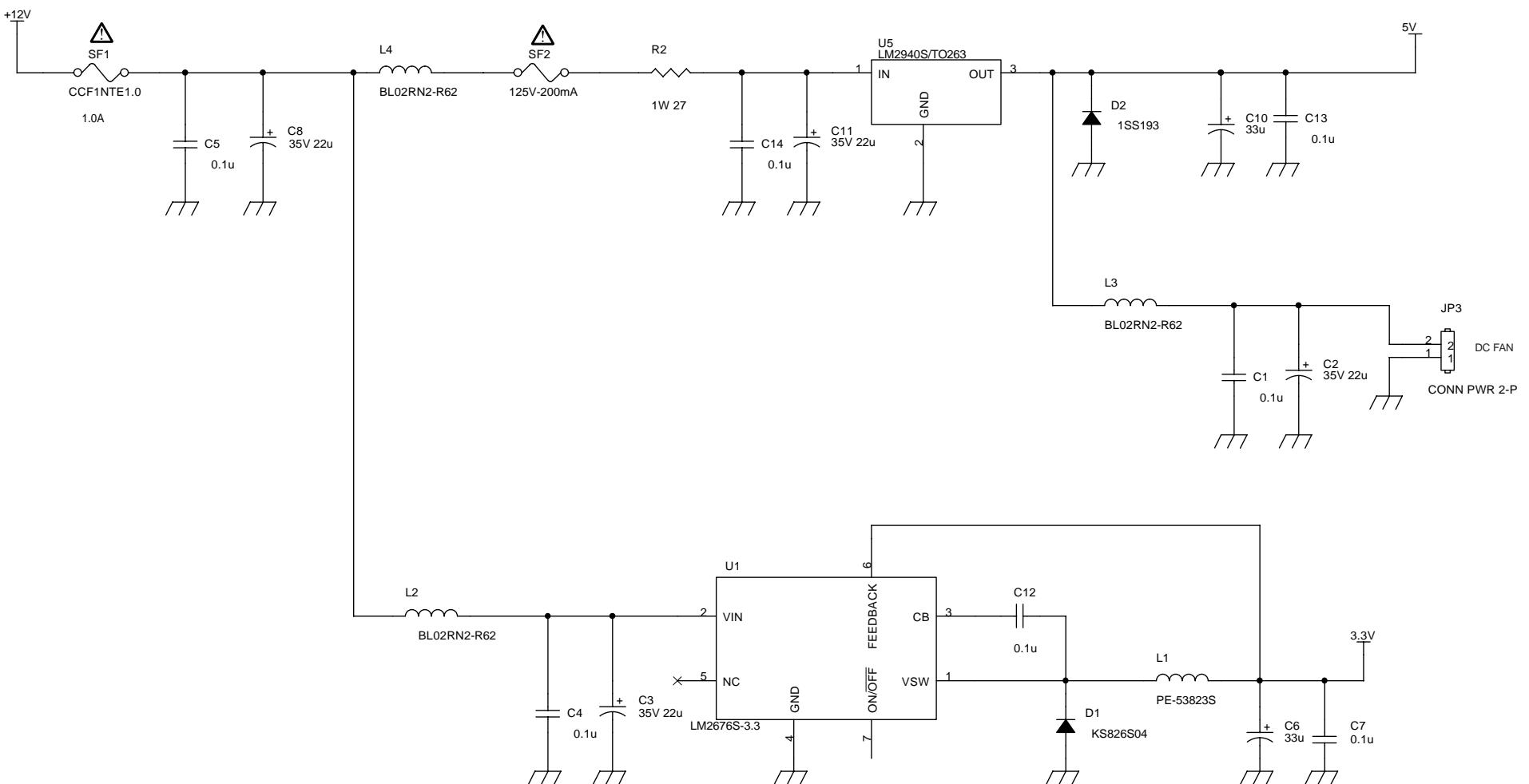






1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

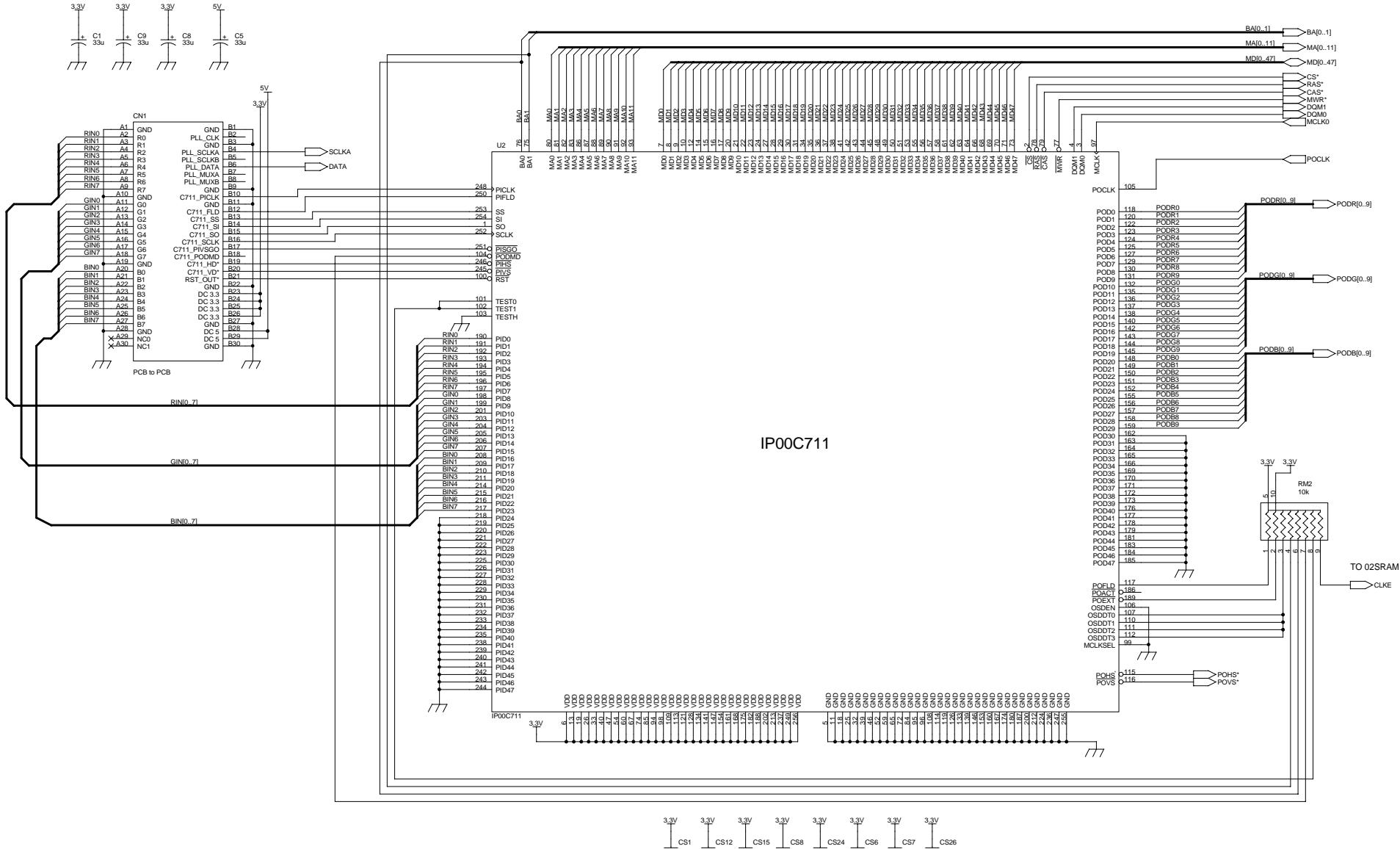




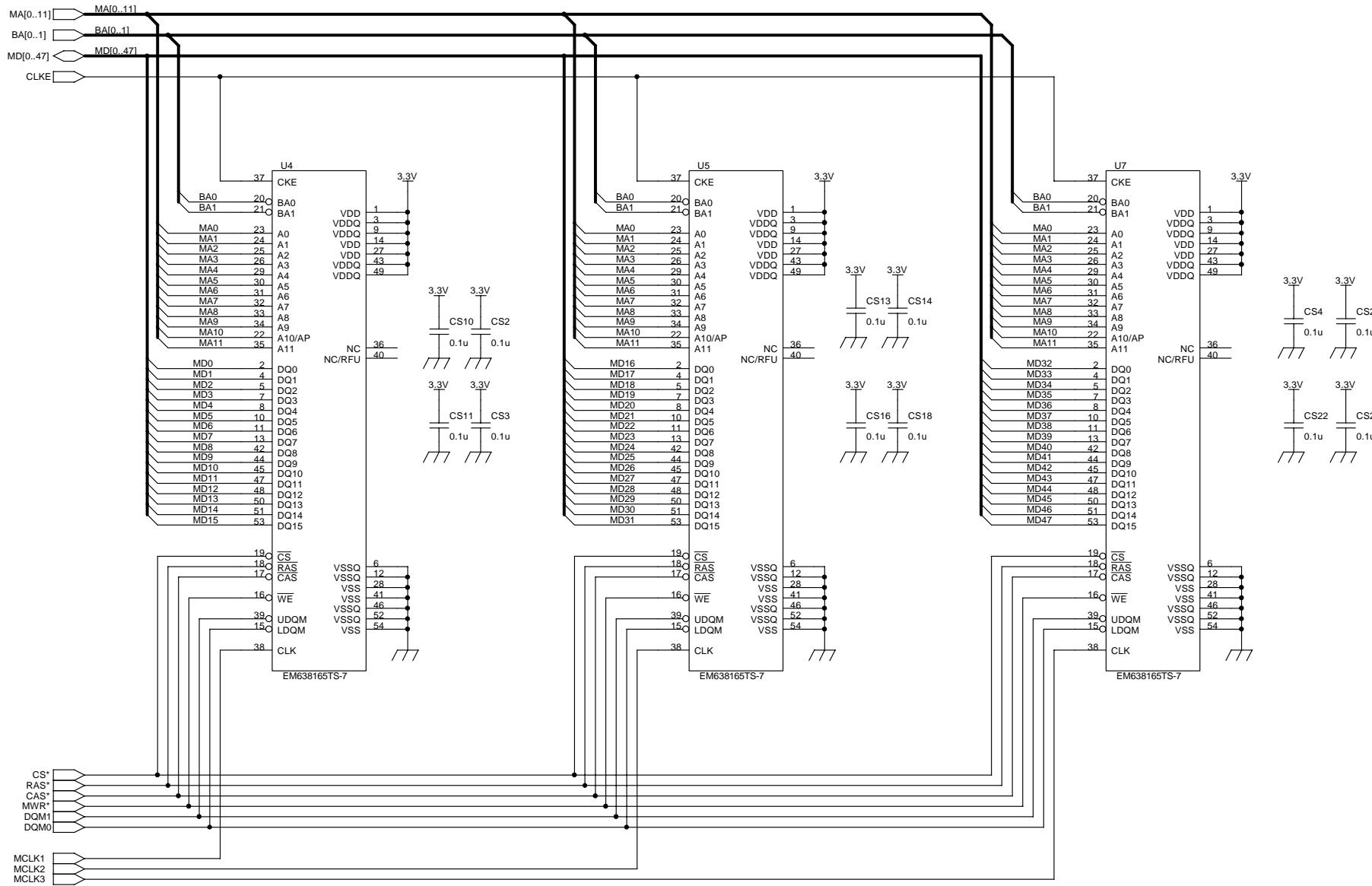
IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED WITH THE MARK Δ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

COMPONENT NAME	MAIN	03/03
CIRCUIT BOARD NO.	DRAWING NO.	
1A860S087	KR	
SCM005		

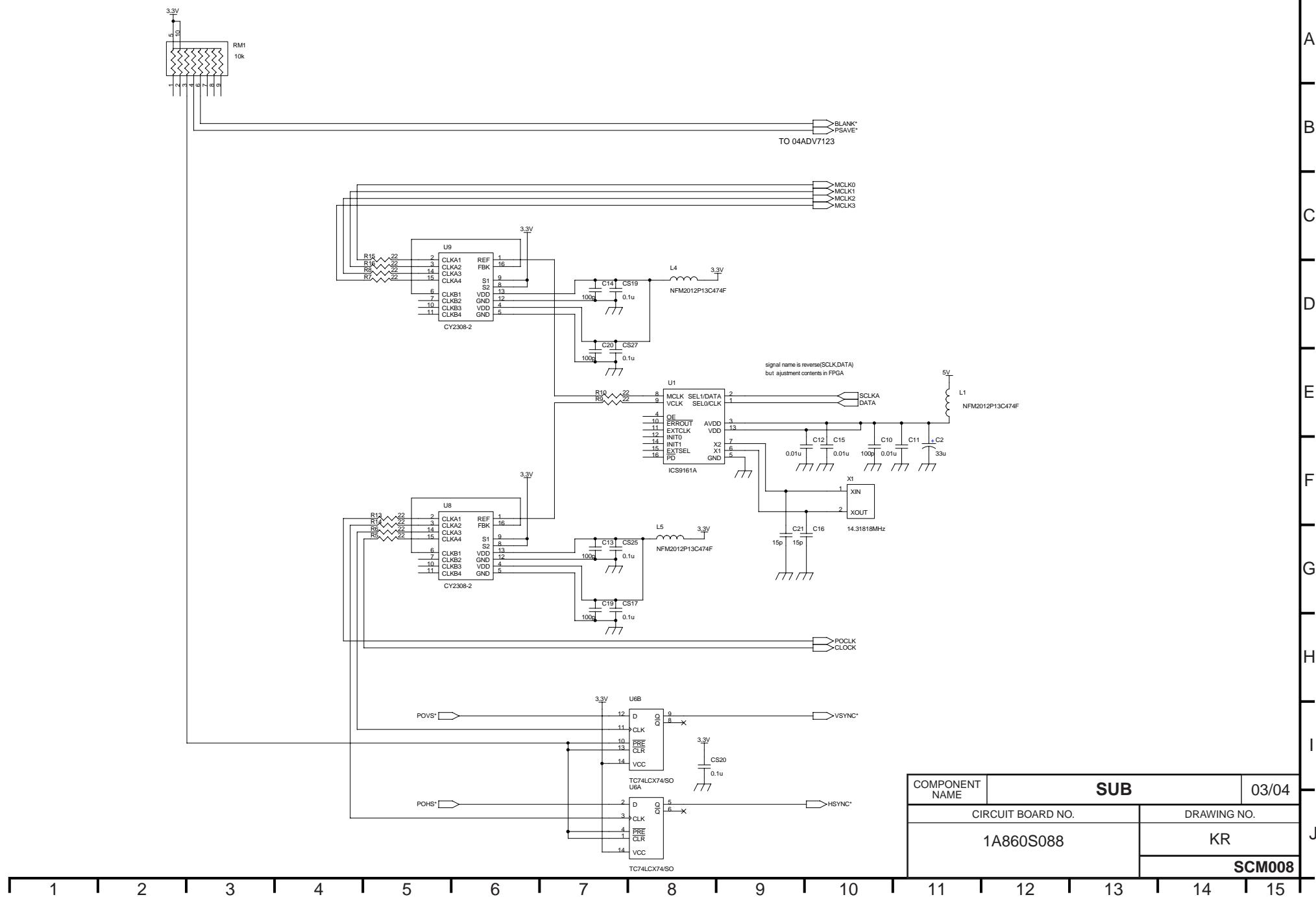


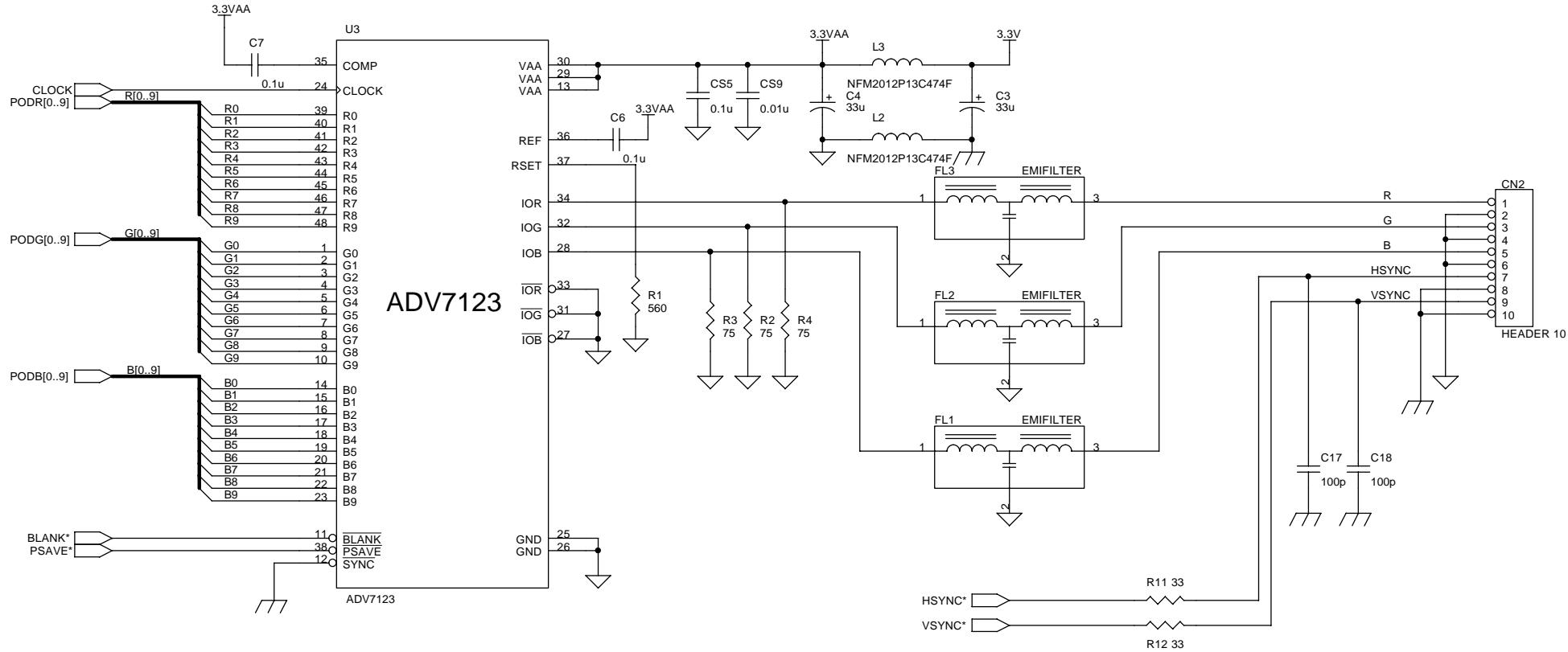
COMPONENT NAME	SUB		01/04	
CIRCUIT BOARD NO.		DRAWING NO.		
1A860S088		KR		
		SCM006		
11	12	13	14	15



COMPONENT NAME	SUB	02/04
CIRCUIT BOARD NO.	DRAWING NO.	
1A860S088	KR	
SCM007		

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15





COMPONENT NAME	SUB	04/04
CIRCUIT BOARD NO.	DRAWING NO.	
1A860S088	KR	SCM009

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

A
B
C
D
E
F
G
H
I
J

SECTION 2

CIRCUIT BOARD DIAGRAMS

NOTE:

BE SURE TO MAKE YOUR ORDERS OF REPLACEMENT PARTS ACCORDING TO PARTS LIST

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

CONTENTS

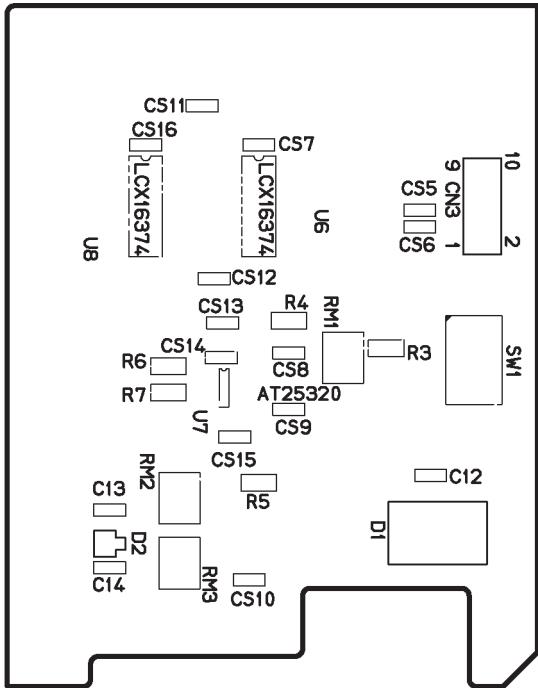
MAIN P.C.BOARD (1A860S087).....	CBA-1
SUB P.C.BOARD (1A860S088)	CBA-1

MAIN P.C.BOARD (1A860S087)

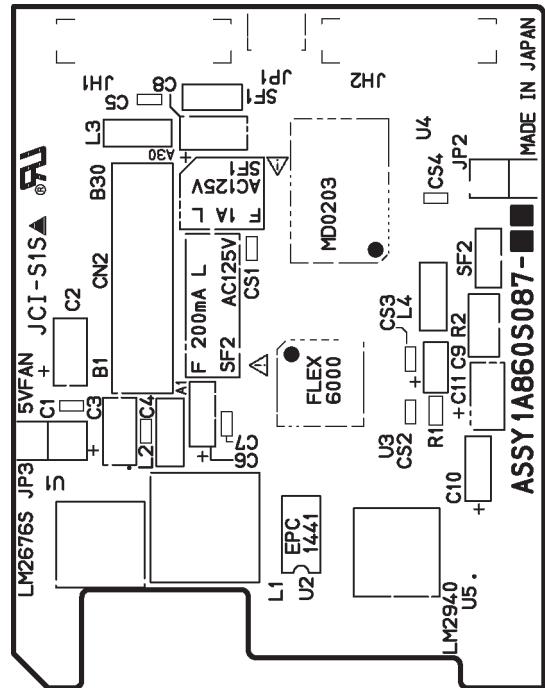
IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED WITH T

CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE
SAME TYPE.

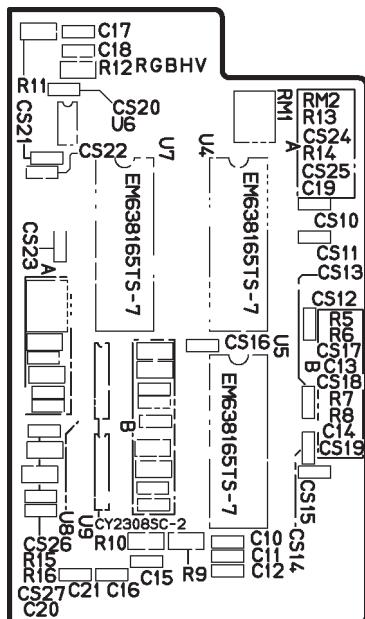


(FOIL SIDE)

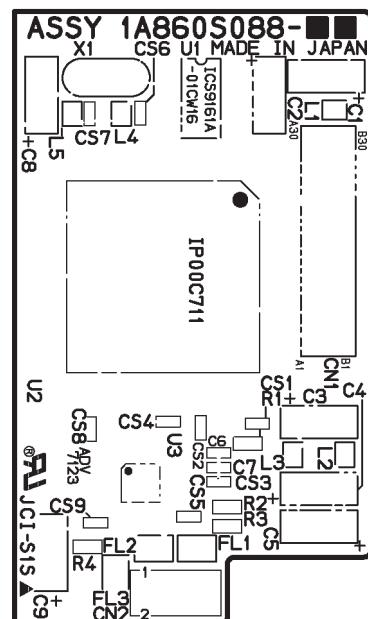


(COMPONENTSIDE)

SUB P.C.BOARD (1A860S088)



(FOIL SIDE)



(COMPONENTSIDE)

SECTION 3

EXPLODED VIEWS & REPLACEMENT PARTS LISTS

Note:

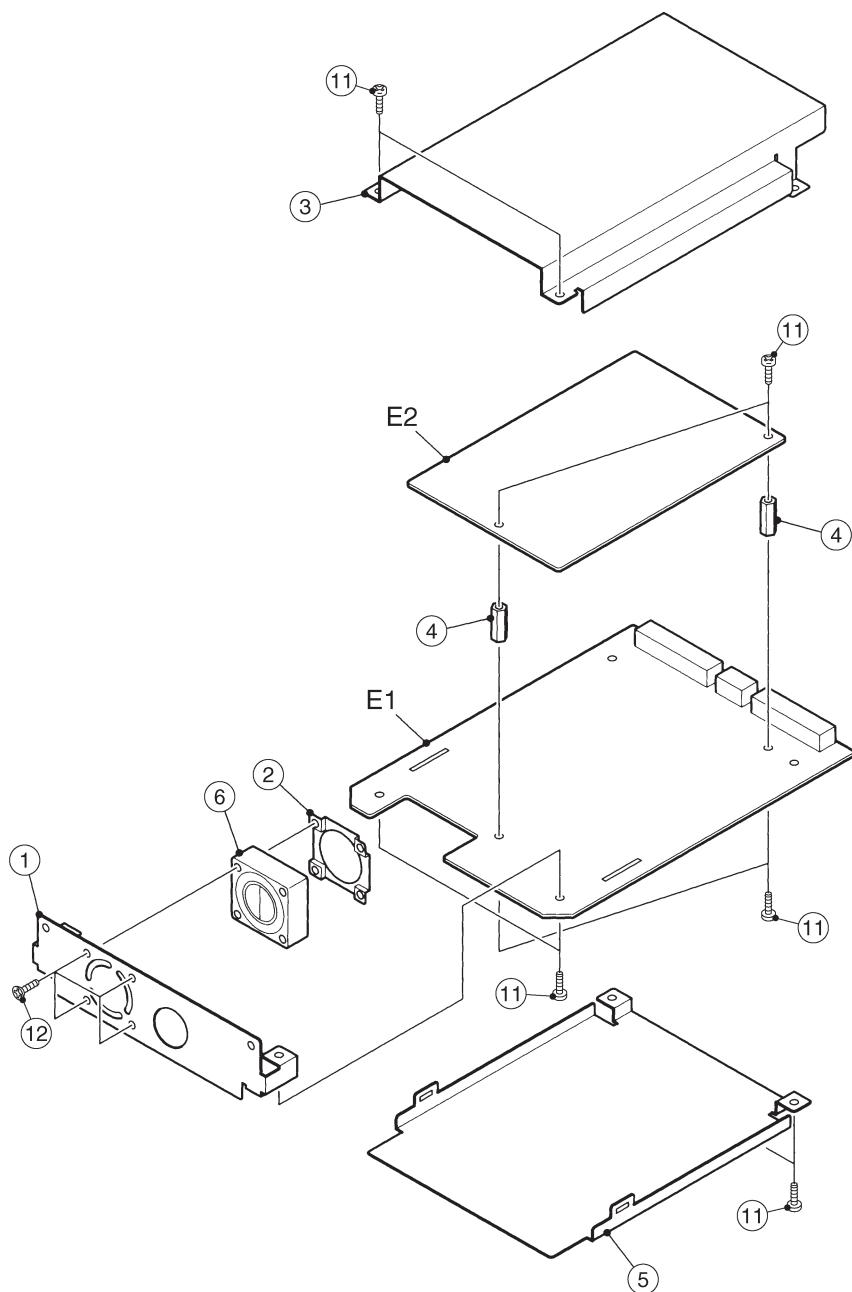
1. *Be sure to make your orders of replacement parts according to this list.
2. Unless otherwise specified, all resistors are in OHMS, K=1,000 OHMS,
all capacitors are in MICROFARADS (μ F), P= $\mu\mu$ F.
3. The P.C. Board units marked with "■" shown below the main assembled parts.
4. The parts marked with \ominus on the exploded view show the electric parts.
5. **IMPORTANT SAFETY NOTICE**
Components identified with the mark \triangle have the special characteristics for safety. When replacing any
of these components, use only the same type.
6. The marking (RTL) indicates the retention time is limited for this item.
After the discontinuation of this assembly in production, it will no longer be available.

CONTENTS

Casing Parts Assembly	PRT-1
Packing Parts Assembly.....	PRT-3
Electrical Replacement Parts List.....	PRT-5

CASING PARTS ASSEMBLY

CASING PARTS ASSEMBLY

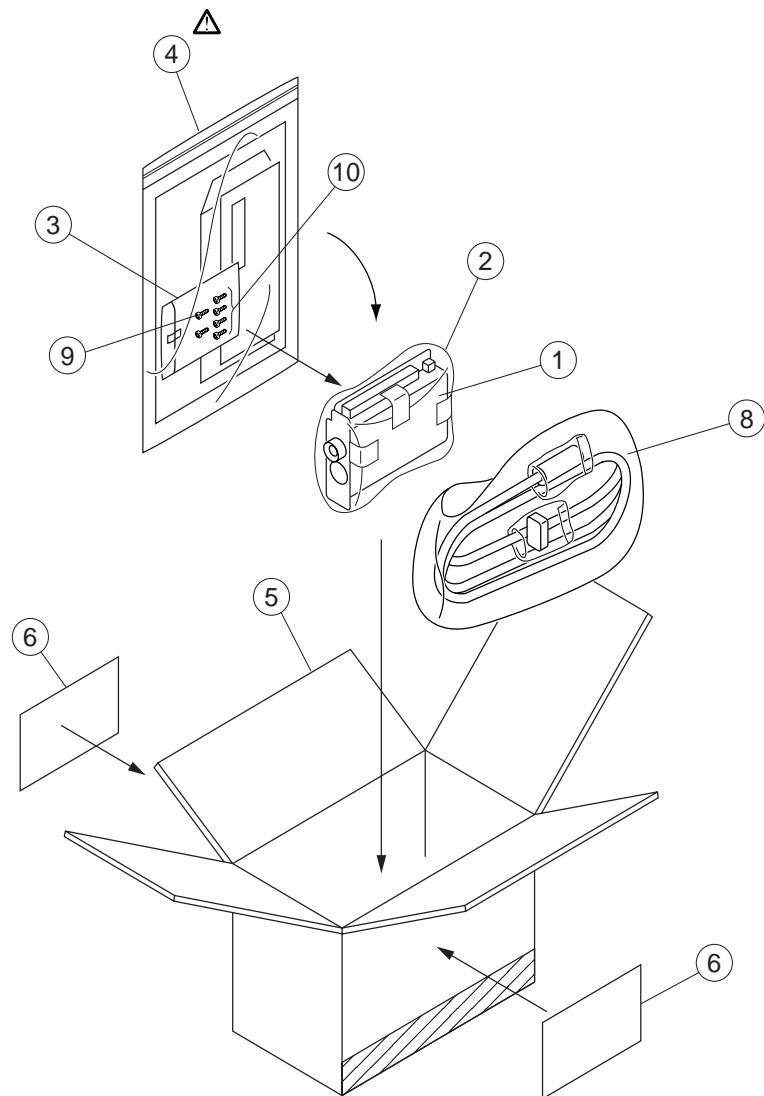


PACKING PARTS ASSEMBLY

Components identified with the mark  have the special characteristic for safety.
When replacing any of these components, use only the same type.

PACKING PARTS ASSEMBLY

Components identified with the mark Δ have the special characteristic for safety.
When replacing any of these components, use only the same type.



Components identified with the mark **▲** have the special characteristic for safety.
When replacing any of these components, use only the same type.

ELECTRICAL REPLACEMENT PARTS LIST

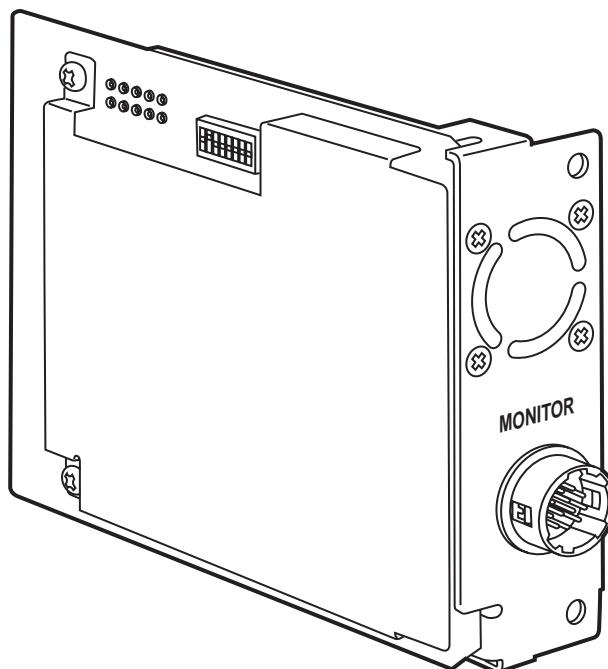
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E1	1A860S087	SVGA P.C.BORD	1	(RTL)
■ E2	1A860S088	SVGA SUB P.C.BORD	1	(RTL)
■ E1	1A860S087	SVGA P.C.BORD	1	(RTL)
C1	F1H1E1040001	C.CAPACITOR CH 25V 0.1U	1	
C2,C3	TMCME1V226	CAPACITOR	2	
C4,C5	F1H1E1040001	C.CAPACITOR CH 25V 0.1U	2	
C6	TMCMC1C336	CAPACITOR	1	
C7	F1H1E1040001	C.CAPACITOR CH 25V 0.1U	1	
C8	TMCME1V226	CAPACITOR	1	
C9	F3G1C1060005	T.CAPACITOR CH 16V 10U	1	
C10	TMCMC1C336	CAPACITOR	1	
C11	TMCME1V226	CAPACITOR	1	
C12-14	F1H1E1040001	C.CAPACITOR CH 25V 0.1U	3	
CN2	5-179010-2	CAPACITOR	1	
CS1-16	F1H1E1040001	C.CAPACITOR CH 25V 0.1U	16	
D1	KS826S04	DIODE	1	
D2	ISS193	DIODE	1	
FA1	F2008BB-5XCV	DC FAN	1	
JH1,H2	K1MR70B00001	CONNECTOR	2	
JP1	K1KA12B00002	CONNECTOR (MALE)	1	
JP2,P3	5046-02A	CONNECTOR	2	
L1	PE-53823S	COIL	1	
L2-L4	VLP0056	COIL	3	
R1	RK73K2ATD56K	M.RESISTOR	56K	1
R2	RK73H3ATD27	M.RESISTOR	27	1
R3,R4	RK73K2ATD22	M.RESISTOR	27	2
R5-R7	RK73K2ATD1K	M.RESISTOR	1K	3
RM1-M3	D1HA10380003	COMBI.R-R	10K	3
▲ SF1	SSFC1A	FUSE	1	K5G102B00004
▲ SF2	SSFC200MA	FUSE	1	
SW1	CHS-08A	SWITCH	1	
U1	LM2676S-3.3	IC	1	
U2	EPC1441PC8	IC	1	C3DAKA000013
U3	C1ZBZ0001760	IC	1	
U4	MD0203	IC	1	
U5	C0CBADG00007	IC	1	
U6	C0JBAF000211	IC	1	
U7	C3EACC000024	IC	1	
U8	C0JBAF000211	IC	1	
		MISCELLANEOUS		
XNG2E	NUT		1	
XWG2	WASHER		1	
XWA2B	WASHER		1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E2	1A860S088	SVGA SUB P.C.BORD	1	(RTL)
C6,C7	F1H1E1040001	C.CAPACITOR CH 25V 0.1U	2	
C10	F1H1H101A802	C.CAPACITOR CH 50V 100P	1	
C11,12	F1H1E1030011	C.CAPACITOR CH 25V 0.01U	2	
C13,14	F1H1H101A802	C.CAPACITOR CH 50V 100P	2	
C15	F1H1E1030011	C.CAPACITOR CH 25V 0.01U	1	
C17-20	F1H1H101A802	C.CAPACITOR CH 50V 100P	4	
CN1	177984-2	CONNECTOR	1	
CN3	HR10A10R12P	CONNECTOR (MALE)	1	K1AA112J0004
CS1-S8	F1H1E1040001	C.CAPACITOR CH 25V 0.1U	8	
CS9	F1H1E1030011	C.CAPACITOR CH 25V 0.01U	1	
CS10-27	F1H1E1040001	C.CAPACITOR CH 25V 0.1U	18	
FL1-L3	NPM51R10P107	FILTER	3	
L1-L5	F1M1C4740001	COIL	5	
R1	RK73K2ATD560	M.RESISTOR	560	1
R2-R4	RK73K2ATD75	M.RESISTOR	75	3
R5-10	RK73K2ATD22	M.RESISTOR	22	6
R11,12	RK73K2ATD33	M.RESISTOR	33	2
R13-16	RK73K2ATD22	M.RESISTOR	22	4
RM1,M2	D1HA10380003	COMBI.R-R	10K	2
U1	C02BZ0000385	IC	1	
U1	IP00C711	IC	1	
U3	C0FBBF000029	IC	1	
U4,U5	EM638165FS-7	IC	2	
U6	TC74LCX74FT	IC	1	
U7	EM638165FS-7	IC	1	
U8,U9	CY2308SC-2	IC	2	
X1	AT-49	CRYSTAL OSCILLATOR	1	

Service Manual

- Sec. 1** *Schematic Diagrams*
- Sec. 2** *Circuit Board Diagrams*
- Sec. 3** *Exploded Views & Replacement Parts Lists*

SVGA card
AW-PB307P/E



Panasonic

© 2002 Matsushita Electric Industrial Co., Ltd. All rights reserved.
Unauthorized copying and distribution is a violation of law.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products deal with in this service manual by anyone else could result in serious injury or death.

AW-PB307P

Specifications and accessories

Specifications

Power supply	: DC 12 V (supplied from camera unit)
Power consumption	: 3.7 W

 indicates safety information.

Dimensions (W × H × D)	: 3-5/8" × 2-3/4" × 7/8" (92 × 70 × 21.5 mm)
Weight	: 0.24 lbs (110 g)
Screen size	: XGA 1024 × 768 dots HSYNC; 48.8 kHz VSYNC; 60 Hz
	: SVGA 800 × 600 dots HSYNC; 37.9 kHz VSYNC; 60 Hz
	: VGA 640 × 480 dots HSYNC; 31.5 kHz VSYNC; 60 Hz
Output connector	: MONITOR, round 12-pin connector (converted to D-sub 15-pin connector using the accessory conversion cable)
Usable temperature range	: 14 F to 113 F (-10°C to 45°C)
Humidity	: 30% to 90%

Accessories

Operating Instructions	: x 1
12-pin/15-pin conversion cable	: x 1
Screws (6 mm long) (8 mm long)	: x 2 : x 4

Specifications and accessories

Specifications

Power supply	: DC 12 V (supplied from camera unit)
Power consumption	: 3,7 W

 indicates safety information.

Dimensions (W × H × D)	: 92 × 70 × 21,5 mm
Weight	: 110 g
Screen size	: XGA 1024 × 768 dots HSYNC; 48,8 kHz VSYNC; 60 Hz
	: SVGA 800 × 600 dots HSYNC; 37,9 kHz VSYNC; 60 Hz
	: VGA 640 × 480 dots HSYNC; 31,5 kHz VSYNC; 60 Hz
Output connector	: MONITOR, round 12-pin connector (converted to D-sub 15-pin connector using the accessory conversion cable)
Usable temperature range	: -10°C to 45°C
Humidity	: 30% to 90%

Accessories

Operating Instructions	: × 1
12-pin/15-pin conversion cable	: × 1
Screws (6 mm long)	: × 2
(8 mm long)	: × 4

SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohm meter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. The resistance value must be more than 5Ω .

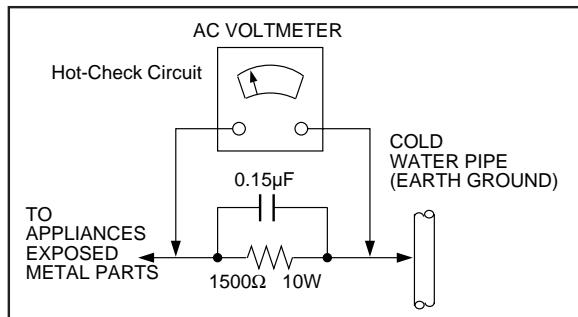


Figure1

LEAKAGE CURRENT HOT CHECK (See Figure 1)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a $1.5k\Omega$, $10W$ resistor, in parallel with a $0.15\mu F$ capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet repeat each of the above measurements.
6. The potential at any point should not exceed 0.15 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 0.1 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically sensitive (ED) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist trap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (most replacement ES devices are package with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
CAUTION : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpacked replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

X-RADIATION

WARNING

1. The potential source of X-radiation in EVF sets is the High Voltage section and the picture tube.
2. When using a picture tube test jig for service, ensure that jig is capable of handling 10kV without causing x-radiation.

Note : It is important to use an accurate periodically calibrated high voltage meter.

3. Measure the High Voltage. The meter (electric type) reading should indicate $2.5kV$, $\pm 0.15kV$. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure. To prevent an x-radiation possibility, it is essential to use the specified picture tube.

Panasonic